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# THE ARCHITECTURAL REVIEW

*A Magazine of Architecture & the Arts of Design.*

EDITED BY MERVYN E. MACARTNEY.

**Vol. XXII. JULY—DEC. 1907.**



LONDON  
*Great New Street, E.C.*



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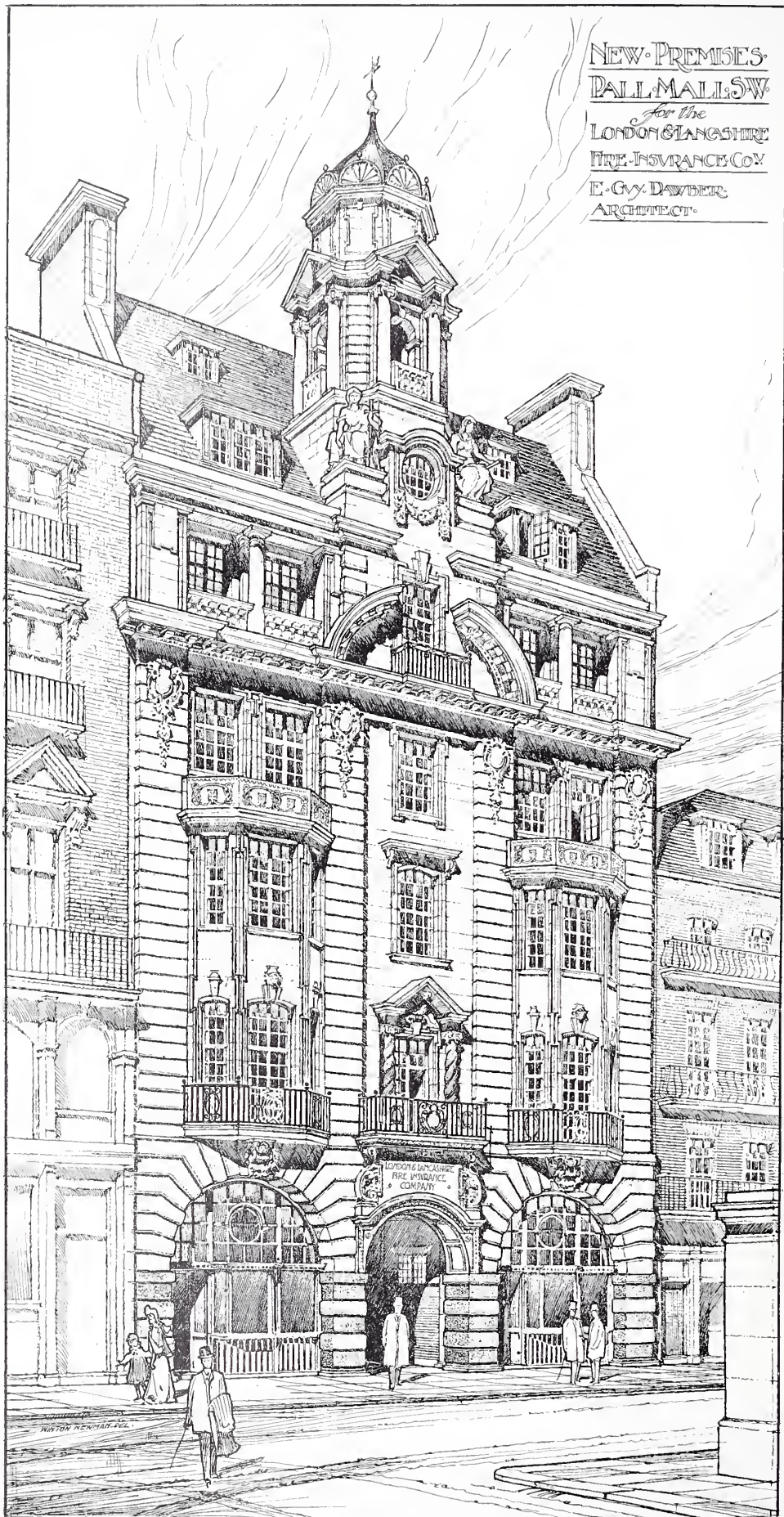
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THE ARCHITECTURAL  
REVIEW, JULY,  
1907, VOLUME XXII.  
NO. 128.



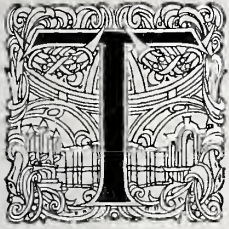
NEW PREMISES  
DALLMALL SW  
for the  
LONDON & LANCASHIRE  
FIRE INSURANCE COY  
E. GY. DAWBER  
ARCHITECT.





# Notes of the Month.

*Roman Sculpture—Mr. Belcher's New Book—Our Historic Buildings—The Cult of L'Art Nouveau—Civic Improvement—Reinforced Concrete.*



THE book by Mrs. Strong on Roman Sculpture, which we review elsewhere, is not only an admirable critical history of sculpture, but contains illuminating remarks on the relations of sculpture and architecture, and traces the development of the naturalistic element in sculptured foliage. In Greek art at its apogee, sculpture, however beautiful in its own right, had been kept in a subordinate position with a strong limit on illusionist qualities. The Roman passion for the pomp of life brought into being a monumental architecture designed to serve as a frame for a sculpture, the single aim of which was to glorify the acts of the emperors. From a need for expressing continuous activities, rather than passive qualities, there developed a restlessness of composition which refused to be bound by any canon of subordination, until in the Arch of Titus, for example, "All relation of the separate groups and

figures to the architecture" (we quote Wickhoff) "is ignored, or more exactly, purposely avoided."

Conventions are thrown to the winds. Flat backgrounds are deserted for subtle variations in depth of relief with such skill of illusion (though as yet with but a feeble grasp of perspective) that beauty of line, symmetry of parts, and the sense of pattern are rejected for the one aim of producing an impression of continuous motion and swelling activities. National pride had wrung from sculpture a place for atmospheric effect.

In so far as sculpture *per se* was concerned, this was a great step in development, but it established for a time a false relation between itself and architecture. The true relationship was never fully re-established, though the treatment of the Trajan Column suggests that when the sculptor had become used to his new powers he was content to employ them with closer reference to architectural needs.

It is true of the Column of Trajan (as it is not true of the Arch of Titus) that the shape of the



ALTAR DECORATED WITH BOUKRANION AND PLANE LEAVES  
AT THE MUSEO DELLE TERME.

From "Roman Sculpture," by permission of Messrs. Duckworth & Co.



monument dictated the method of its decoration. We can feel that to the sculptor rejoicing in a new power of spatial effect and optical illusion, obliged by the demands of the narrative treatment and by the dominating idea of a divine emperor, impelled by the desire for historical truth to give a sense of locality to his backgrounds and to employ for them architectural and scenic originals which would heighten the appeal of his art—we can feel that to such a sculptor the temptation to increase the depth of his relief and to exaggerate the optical effects of which he was now the master, would prove an almost irresistible temptation.

In spite of it, however, the architectural qualities retain their ascendancy. The upward circling of the spiral not only emphasises the height and the soaring effect of the column, but the (comparative) shallowness of the relief takes nothing from its sense of stability. On the other hand, the continual reappearance of the emperor, now directing, now exhorting, now seeking divine favour by sacrifice, prevents any sense of diffusion, and imparts an organic unity to a story which would otherwise be wearisome. Mrs. Strong has made an admirable point in asserting that the supreme merit of the Trajan reliefs lies in the architectural and landscape background of the figures. It is obvious that anything like a true proportion of man to tree or man to building is impossible in a narrow band, and the Trajanic sculptor has combined with a naturalistic truth of detail a disregard of scale so magnificent that the locality of the action, though faithfully indicated, becomes merely a tapestried background for the human action that takes place in front of it.

The figures of the Provinces which once decorated the podium of Hadrian's Temple of Neptune at Rome are an exquisite example of a fit use of sculpture in architecture. Though actually reliefs, they are almost in the round, and standing as they did beneath the columns, gave a sense of solidity and support at the points where the strength of the podium was most taxed.

The use of figures in modern buildings is rarely happy. The usual impression they give is one of desolation and separateness from the building they are supposed to adorn. The statues on the new War Office and on the London and Lancashire Insurance Company's building in Pall Mall have an organic relation to their buildings, but at some other new buildings they seem dreary strangers to each other and to their surroundings.

Modern sculpture shows such a delightful vitality that it will be a great loss if architects

do not direct sculptors' efforts into the right channels.

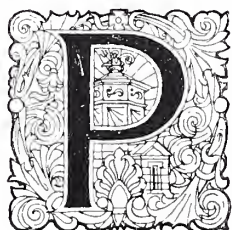
The study of the purely decorative sculpture of Roman times which is afforded by Mrs. Strong's book should be altogether helpful.

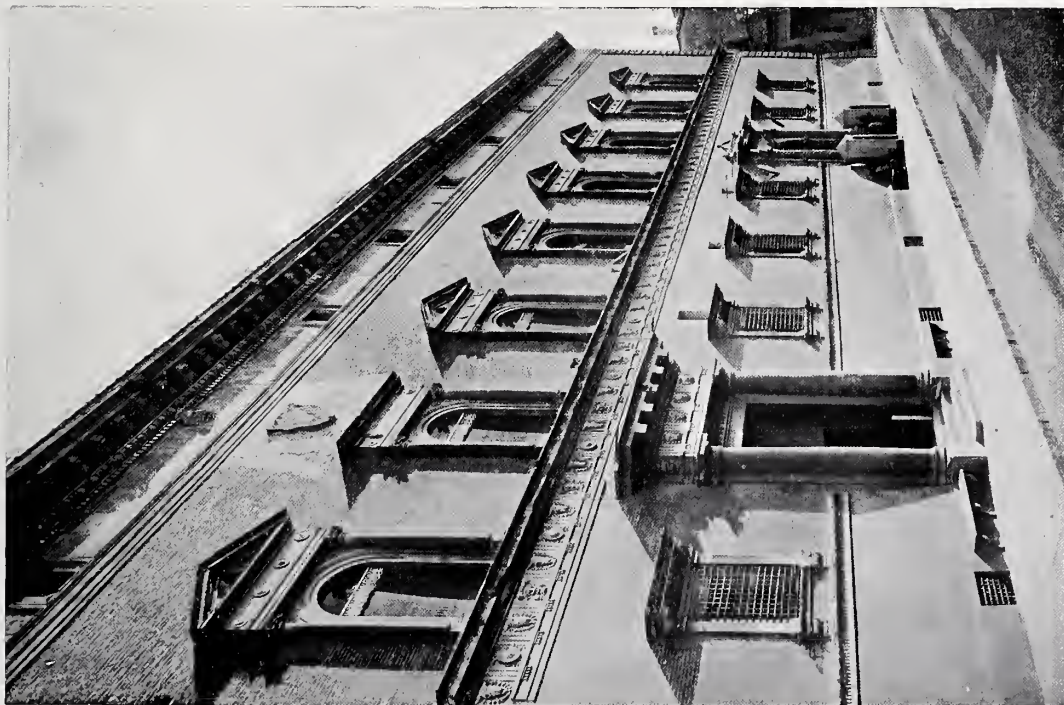
The altar with the plane-leaves at the Museo delle Terme, the illustration of which we reproduce by the courtesy of Messrs. Duckworth, is notable not only for the exquisite character of the carved foliage and the brilliant realism of the boukranion, but also for its revelation of the source from which mediæval art came. While the main outline of a garland is retained, there is no pedantic straining after symmetry, but a frank delight in natural forms, and withal a strict refusal to tamper with the solidity and unity of plane of the altar itself.

More conventional in their outlines, but even more brilliant in their modelling, are the swags on the Augustan *Ara Pacis*, where the gradual increase in projection from the suspended ends to the thickest part of the garland gives a sense of trailing weight and of swaying movement. The dying down of the lowest parts of the relief into the background incorporates the carving with the mass it decorates in a way entirely satisfying.

In the carving of wreaths and other pleasing conventions used by our modern classics there is often the sense that the ornament has been separately carved and glued to a foreign and even resentful background, while on the other hand it is not always realised that to secure a sense of cohesion it is unnecessary to be simply amorphous. There be some spreading pear trees creeping like a vegetable octopus over the face of otherwise pleasant buildings that one hopes may be removed in the fulness of time and with wiser decorative counsels.

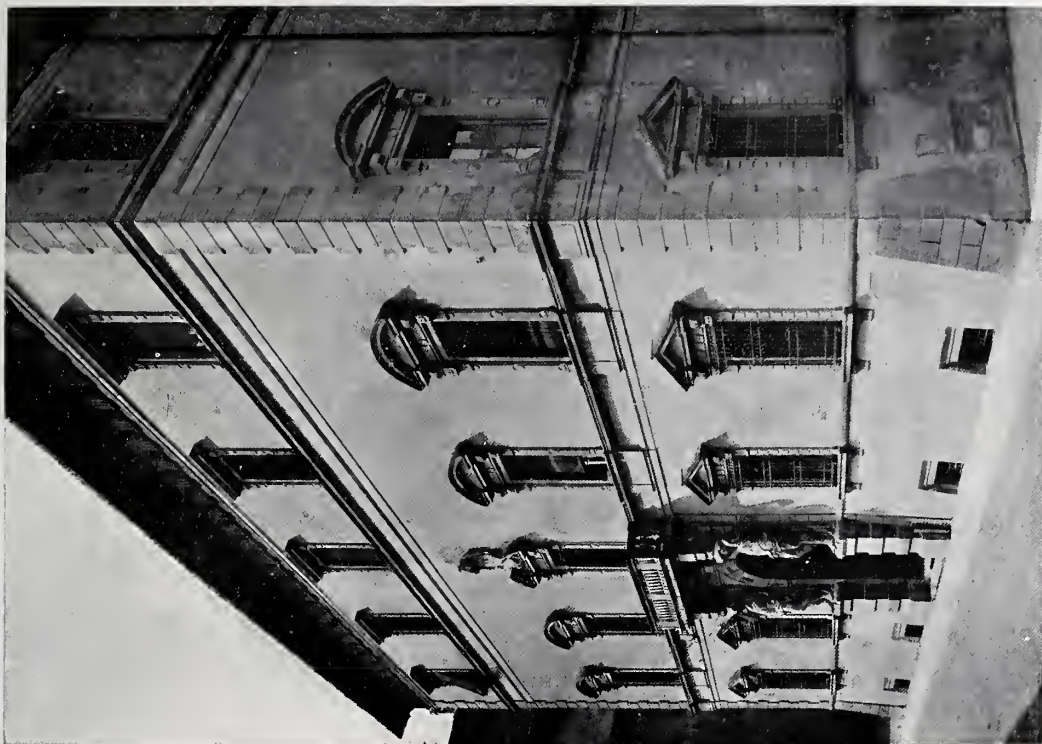
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 POPULAR indifference to the essentials and claims of architecture has frequently called for comment in these columns. How far it is attributable to the impossibility of portioning out an art into sections with neat labels in the manner beloved of the British race; how far it arises from the inability of the untrained faculty to rise above the merely material aspect of life; and how far it is due to pride of possession in a debased taste which is too egoistic to admit correction from mature knowledge or experience, are three roads upon which inquiry might proceed for some distance. Of recent years there have been faint but welcome indications that public attention is being directed more and more to civic



The Palazzo Albergati, Bologna.  
An Instance of Correctness in Scale.

N.B. — *The sentry-boxes give the key to the large and proportionate scale of the whole building.*



Palazzo Bargellini, Bologna.  
An Instance of Restraint.

ILLUSTRATIONS FROM "ESSENTIALS IN ARCHITECTURE." BY JOHN BELCHER, A.R.A. BY PERMISSION OF MR. J. T. BAISFORD.



development, not merely as to necessities like trams and sewers, but in the design and character of city buildings, the laying out of streets and parks, and such-like higher manifestations of the architect's art.

Without being ungracious toward this new development, it would be idle to attribute it solely and entirely to a growing love of art for its intrinsic worth, though this virtue may animate the breasts of the few. Rather has it begun to dawn upon our conservative-minded and not very quick-witted countrymen, especially those of them who have visited the show cities of the Continent, that a fine city—fine, that is to say, in its artistic and architectural aspects—is no mean commercial asset to a nation. The fine city acts more or less as a beacon to the travellers and art-lovers of all nations who may be drawn thither for the benefit, in an entirely material sense, of its inhabitants. A benevolent autocracy, such as that which Haussmannised Paris, and in more recent years has placed Berlin in the front rank, may achieve such a desirable end in a single generation. In our own land, with its democratic ideals and traditions, there is no such force available, and any progress must follow on the growth of public opinion and a reformation of the popular ideals. This, if sure, is but a slow progression; and just at present it seems more politic to pursue the matter by a flank attack, to bring up more clearly to the public mind the commercial advantages of good architecture and fine streets, than to rely on the more tedious and laborious method of a direct assault with the horse, foot, and artillery of education. For the waging of a fight against ignorance differs from all other forms of warfare in that the more we slave the less we progress; one must capture the ignorant, not put them to rout.

Then if the appetite grows by what it feeds upon, there is hope that the public, having once acknowledged the necessity for good architecture, may derive a taste and appreciation for the art which will materially add to its strength and future progress.

The burden at present lies in the development among the laymen of, first a proper appreciation of the principles and qualities of architecture, and second a right judgment which shall apply those principles and qualities fairly to any building or design with which it may be confronted. It is impossible that this be done except by the slow processes of education. Architecture suffers in this respect through being, under compulsion, the rider of two horses in the circus of the arts. It is tolerably certain that, by over-emphasising the scientific as against the artistic side, architecture loses by comparison with the productions of the

daughter arts. They, too, have their scientific side, but it is veiled under the more discreet term of "technique." Moreover, their manifestations come whole to the public; the secret processes of their production are not seen, and they are mainly the work of but one or two hands. With buildings, the scientific piling of stone upon stone, girder upon stanchion, and vault upon walls, is all too apparent to the crowd, and the work is the production of so many hands, that the architect, if he be not lost to view in the press, is like to receive small appreciation from a generation which rates the unthinking hand at a higher level than the directing brain.

It is not to be denied that architecture has its scientific side, but too strong an association, in the public mind, of science with architecture is a little unfortunate. Science is an exposition of natural laws which are immutable; both in their accidence and operation they are beyond human control. Yet the architect in the exercise of his calling has a fairly wide choice, dependent on the materials employed and the method of putting them together, as to the exact laws which are to govern any particular design. In that choice lies his art no less than in the surface expression of his buildings and the arrangement of his plan. Too strong an insistence on science leaves the layman with the belief that building is a mere matter of rule and law, and architecture but the decorative trimming. Such a deplorable impression is all too easy to acquire by a course of reading up the works of architectural enthusiasts of the last century.

A good text-book on architecture for the use of the layman has long been needed. Mr. Statham, in his "*Modern Architecture*," published some years ago, made an attempt to interest the public, as well as the architect, in the artistic side of building; more recently, our leading architects have been impressed with the necessity for obtaining a public appreciation for the ethics of their art, and the developing sentiment towards recognition has been crystallised by the expressed desire of the Royal Institute of British Architects to stimulate a popular interest in architecture. In acknowledgment of this desire Mr. John Belcher, A.R.A., has prepared a handsome little volume to appeal "to that small but ever-widening circle of the general public who have both the leisure and the desire to take an intelligent and critical interest in the architecture of the buildings in which, or in the midst of which, they pass their lives, or which they visit from time to time in their country excursions, or in their ordinary travels."

Mr. Belcher has set out his thesis with considerable cleverness, and in a manner to be easily grasped by the veriest tyro. He divides his subject

into four main divisions: Principles, Qualities, Factors, and Materials; the Principles being those of Truth and Beauty; the Qualities:—Strength, Vitality, Restraint, Refinement, Repose, Grace, Breadth, and Scale; the Factors:—Proportion, Light and Shade; Colour; Solids and Voids, Balance and Symmetry. Under the head of Materials the right use of wood, stone, metals, brick, terra-cotta, cement, &c., is outlined. By “this attempt to formulate the principles and qualities of architecture in more or less precise terms” the author hopes to “introduce an element of intelligent certainty into what too often has been regarded as a mere matter of vague and unreliable taste or even caprice.” “The power of appeal of a noble work of art must depend largely upon the innate qualities of the spectator, but the perceptions of the human mind need drawing out, and in the elementary stages call for positive direction.”

In the introduction the relations between the artistic and scientific sides of architecture are considered at some length. The author holds that “though the two may be considered apart, they are practically inseparable. Architecture is not a science plus art, but a science interpenetrated in all its methods and applications by the true spirit of art.” It is not sufficient to provide good materials and all conveniences and hygienic requirements. “The architect has to provide for all this, and do it all in such a way that the building as a whole, and its various parts and features in detail, may be expressive of the truth and beauty of life, and may serve to ‘raise the thought and touch the heart’ of all who look at it.” Architecture is the artistic expression of the scientific necessities of building construction—would be a short and useful platitude expressing as much. A later paragraph is better, and to the point:—“A building, however sound and good on the scientific side, can never be elevated to the rank of architecture by simply dressing it up in ornament.”

As the book is written strictly with a view to interesting the public, much of the material will be familiar ground to architects. That fact, however, should not deter them from studying the careful arrangement and grouping of these qualities and essentials, emphasised by a wealth of illustrations exemplifying the various points, and occasionally introduced for purposes of cruel comparison.

That Mr. Belcher should have found time from the calls of a busy practice to indite a work to further the aims of the Royal Institute is a matter upon which that august body may be congratulated. That he should have done it so surprisingly well merits personal felicitation.



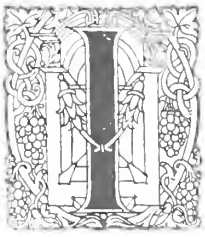
WE are glad to hear that Glastonbury Abbey has been reserved for a better fate than we apprehended in our note of last month. The public spirit of Mr. Ernest Jardine, who advanced the purchase money, some £30,000, has secured the property. Meanwhile the Bishop of Bath and Wells, on behalf of the Anglican Church, is raising the necessary sum to take it over. The Bishop's fund amounts to some £15,000, and he has made an appeal through *The Times* for subscriptions from the large Anglican community outside his diocese; it is to be hoped that the response will be liberal. The purpose to which the residence on the estate is to be devoted has not yet been settled, and probably will not be until the repurchase from Mr. Jardine is completed. In all probability, however, it will be utilised as a training college.

While the Glastonbury remains are in a fair way to obtain security and preservation, another notable building is threatened with a sudden and inglorious fate. The famous Crosby Hall, in Bishopsgate Street, London, long famous as a city restaurant, has been sold, is to be demolished, and its site devoted to the erection of a new banking establishment. The purchase money is cited as £233,000, and the late owner has a proviso that he may retain any of the historical or artistic treasures of the interior. Into the reasons which have led to the sale of the building it is beside the purpose to inquire; it suffices that this historical mansion—one of the last, if not actually the last, domestic links with mediæval London—will irretrievably be lost unless a speedy and determined effort is made for its salvation.

The chances of its preservation are not, it must be admitted, very hopeful. The capital sum needed to buy out the present interests is enormous, and it has been stated by a member of the City Corporation that the new owners are determined to build “at all hazards.” This hardly looks as if any overtures would be entertained or welcomed. Moreover, the Corporation made rather a *faux pas* in rejecting the motion for inquiry when it was first brought up before them. There are signs now that most members regret that somewhat hasty decision. The deputation that waited on the Corporation represented all the influential art and archæological bodies; but, confronted by large financial interests, such bodies have a poor chance of enforcing their views. The one hope left is that the London County Council, by virtue of its General Powers Act, may buy. They are moving in the matter, and they can compel the owners to sell. So much of Crosby



Hall is modern and meretricious that the cost may even to them appear too great for the old and valuable moiety.



IN a recent issue of *The World's Work and Play* is an article on "The Success of British Architects Abroad," which is remarkable for several statements of a didactic character, and even more for the illustrations accompanying it. We are told that, "The decorative side of architecture is, indeed, the chief point of attraction, and it is through their gifts in this direction that several British architects have won favour. It must not be imagined that the traditional features of British architecture have been adapted or popularised abroad. The principal feature of the modern British School is its freedom from tradition and its quality of perfect simplicity. They draw their inspiration direct from Nature, and while there would be something incongruous in the introduction of an architectural feature belonging to some special British period (such as the Elizabethan staircase or newel post) into a German or French atmosphere, the austerity, restraint, and freshness which characterise the work of our modern British architects are welcome in any country. They have, in short, achieved personal individuality in their work, and it is this quality which ensures universal appreciation, whether the personality of the artist be expressed in a piece of sculpture or a mantelpiece."

Following this pronouncement are sundry extracts from German decorative art magazines in support of it. The initial phrase would either seem to indicate that there is another side to architecture than the decorative, or that the writer is imbued with the old heresy that restricts architecture to the mere decoration of buildings, and eliminates the artistic modelling of their bones. But this may pass. It is news, however, to learn that "the principal feature of the modern British School" is its "freedom from tradition," or that the members "draw their inspiration direct from Nature," unless the author affects to believe that the four British artists, one of whom is a lady, constitute a school in themselves. Some modern architects might feel surprised. The article goes on to state:—

"It may seem curious that a movement emanating in the first place from England should have obtained so little hold on the national interest, but this is perhaps due, in no small measure, to the fact that originality and artistic excellence must frequently be sacrificed to the greater commercial value of mediocrity, and the commercial end must

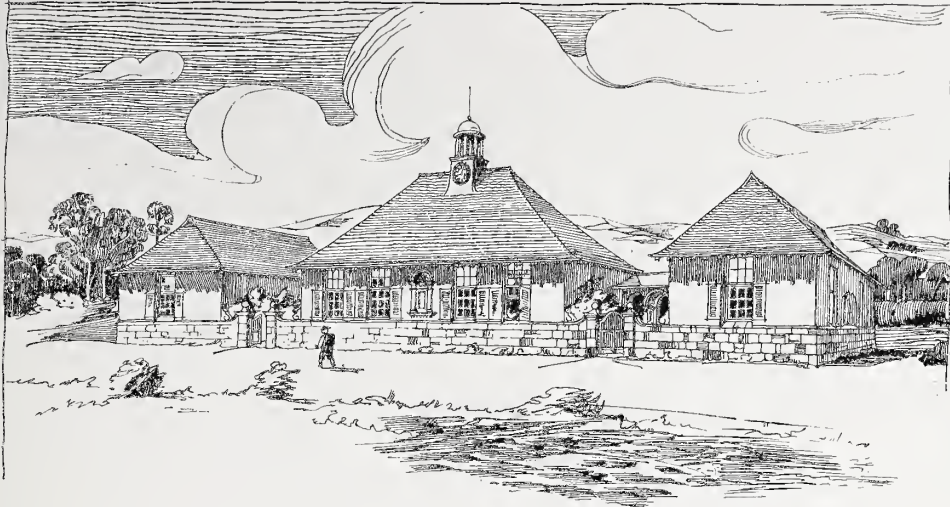
always be the principal one in view. The artists have to design things which will please the taste of a not very intelligent or artistic general public; they must do work that will sell in large quantities; not work which they do because they love it and believe in it."

This is somewhat beside the mark, and if comparisons are odious, they might at least be just. To compare the work of the furnishing firms with the productions of the individual artists mentioned in the article is no fair comparison. For each of those four we could name half a dozen British architects whose work is in accordance with English tradition, character, and taste, and deserving of mention, and who do not design "things that will sell in large quantities." The reason the particular style of decoration illustrated in the article under notice has not made greater headway in England, results from its being entirely foreign and repugnant to English tastes. *L'Art Nouveau* has never made great headway in England, and we hope it never will. An art that is merely novel, or, in our author's words, has "freshness," is not necessarily sound or good, and to attribute to this vaunted decoration the qualities of "austerity" and "restraint," is simply to misuse the English language.



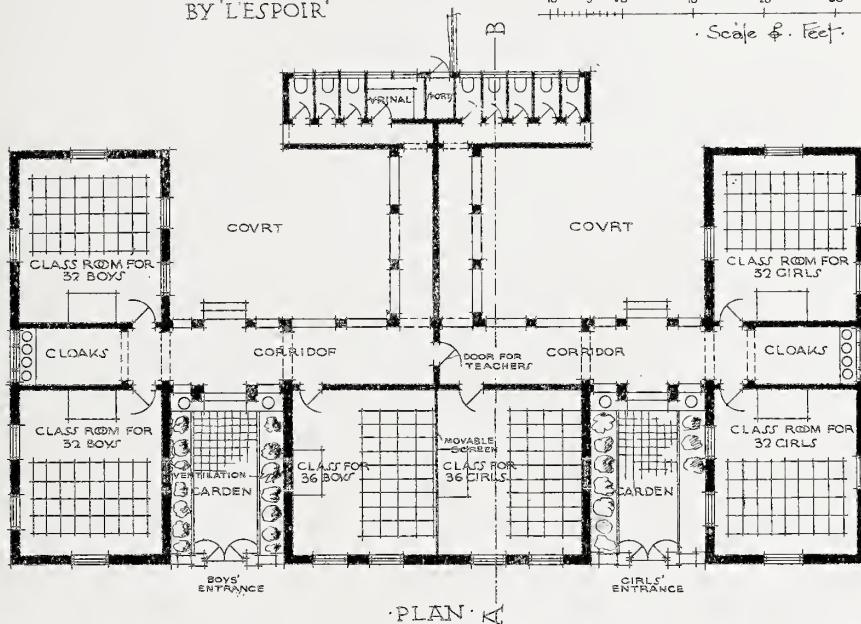
FROM time to time we hear in England of some new and costly civic improvement in an American town. That the average American citizen is much more alive to the advantages of a fine city than is his British cousin is probably no news; the number of improvement schemes promulgated or in progress during the last few years bears witness to American energy in this direction. But, if we are to believe a short comment in a recent issue of *American Homes and Gardens*, it is the artistic aspect of these improvements that appeals most forcibly to the people, and, if such is the case, the American improvement is singular indeed, and the architects and artists of that tireless continent are indeed blessed.

"Civic betterment, municipal embellishment, public art—call it what you will—is the newest and latest form of artistic endeavor. And it might truthfully be called the most popular, for such it seems to be in many senses. Certainly it is the form of art most now talked about, and if the results achieved to date have not been in direct proportion to the discussion it has caused, that has been more due to the brief period under which it has been discussed and the many practical

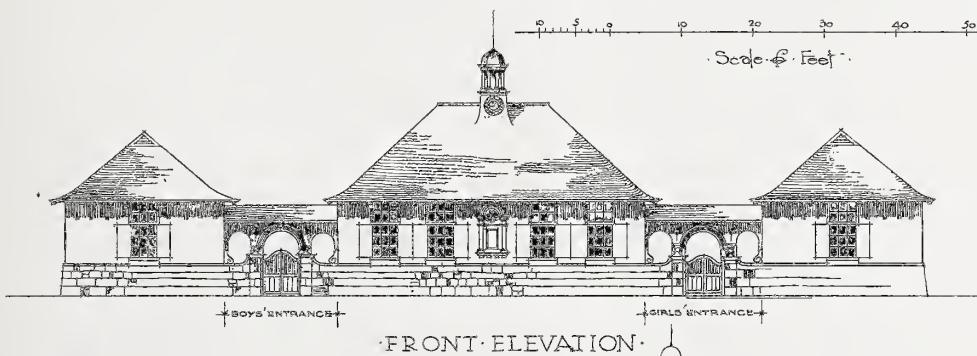


BY 'L'ESPOIR'

10 5 0 10 20 30 40 50 feet  
Scale of Feet.



10 5 0 10 20 30 40 50 feet  
Scale of Feet.



SOUTH AFRICA ARCHITECTURAL AND BUILDING DESIGNING CLUB. COMPETITION NO. 4.  
MIXED ELEMENTARY SCHOOL FOR A TOWN IN A HOT CLIMATE.  
WINNING DESIGN BY 'L'ESPOIR.



difficulties that attend realization than for any other reasons.

"The agencies which are now interested in civic betterment are very numerous. Many of them have no art interest whatever, but are concerned with practical matters of health and sanitation which are obviously of greater importance than any questions of beauty or pure embellishment. Transportation interests are also vitally interested in civic betterment, interested not only for the improvement of existing facilities, but interested also in the future growth of the localities they are serving, whose own future will depend so largely upon them.

"The artistic aspect of civic betterment is, as a matter of course, its least important side, the side least needed, which ministers least to the citizens' necessities, and which, never having been very prominent in contemporary life, seems the one aspect that can be most easily spared. Yet this is the aspect that has been most prominently brought forward and has been most insisted upon. On the whole this has been a very fortunate circumstance. It is the artistic, the visible aspect of civic betterment that has won its greater number of supporters. People who could not see the value of a certain kind of sewage disposal—which they would never see—could immediately recognize the merits of a public work of art—which they could see—stood up for the edification of all beholders. There has been no loss in the insistence of the art point of view in the betterment campaigns. It has added a host of interested supporters to the movement, and given it a distinction it might otherwise never have had.

"Historically the artistic element stands easily first, for the whole agitation began in urging the claims of a better outward appearance and in setting forth the merits of certain works of art which were desired for certain localities. It was very early seen that the setting up of a single monument, the purchase of a painting, the plea for more beautiful flower-gardens, and other like suggestions were not sufficient. Public betterment, it was found, must be general betterment. Those interested in public health urged the greater importance of their own specialty which they justly thought should be developed before any funds, public or private, were expended on ornamental and artistic matters.

"The movement for civic betterment has, therefore, taken on a very much broader view than at first seemed possible. It is now concerned, practically, with every public aspect of civic life.

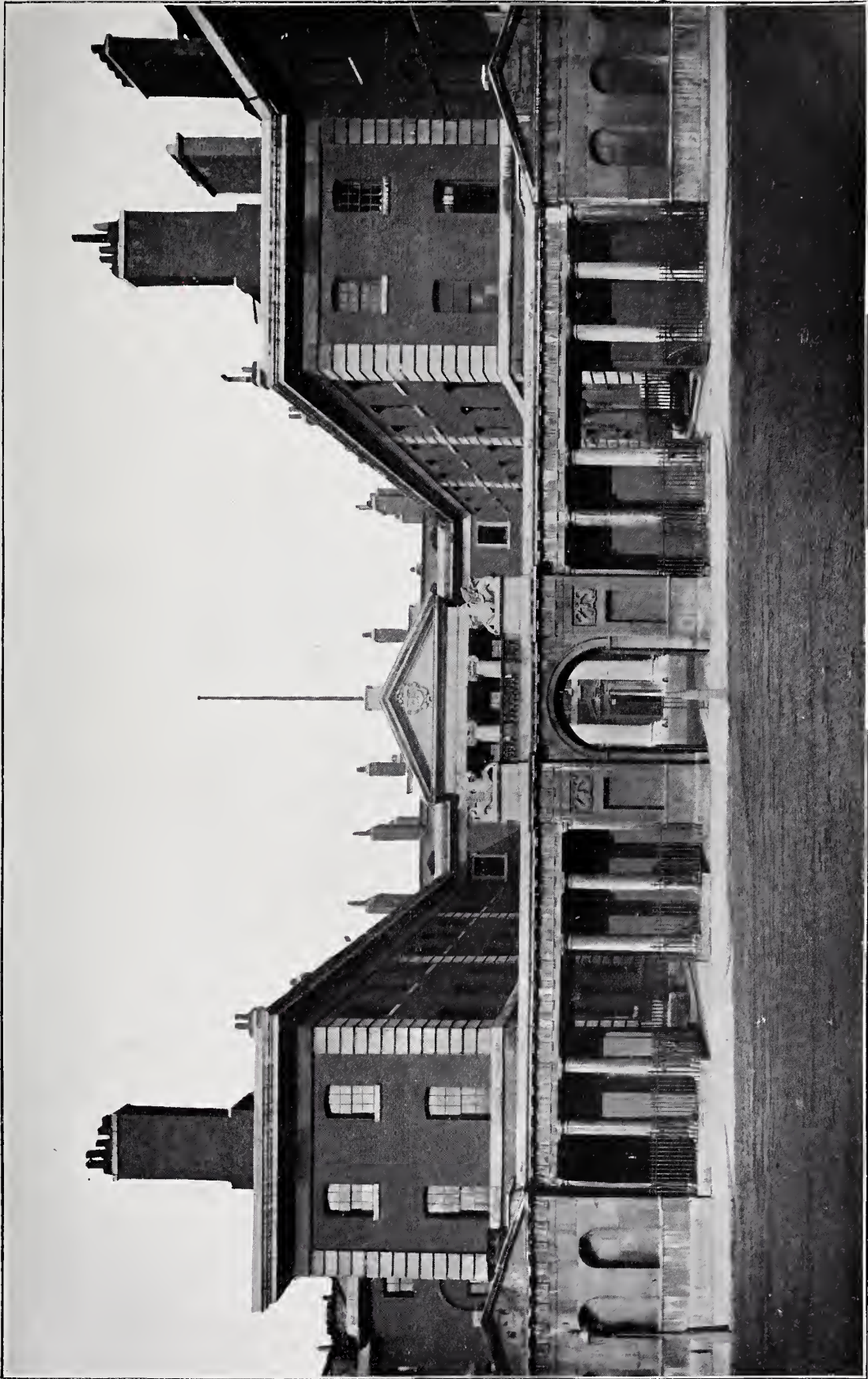
And what is very much more valuable, most of the vital forces which are related to this work are now more or less closely joined in it. The beginnings of a great work have been well started in an effective way."

We are inclined to join issue with the assertion that "the artistic aspect of civic betterment is, as a matter of course, its least important side, the side least needed, which ministers least to the citizens' necessities, and which, never having been very prominent in contemporary life, seems the one aspect that can be most easily spared." True, it is not the most obvious aspect, but the whole germ of an impulse towards civic improvement appears to us to spring from a demand for a higher standard of living, and indirectly, therefore, the development of an artistic sense. Though the initial manifestation may be disgust at dirt and dilapidation, the underlying stimulus would be the offence to the æsthetic feelings. One's thanks therefore are due rather to the American citizen than to his mentors.



HIGHLY significant factor in the erection of concrete buildings, which are rapidly attaining a widespread popularity, is the realisation that stability and security in such structures cannot be obtained without the exercise of unusual care and skill on the part of the workmen. In buildings of the old type—of brick and iron and wood—the responsibility for safety rested almost wholly upon the architect or the engineer who designed them and estimated, with more or less careful precision, the strains, pressures, and other forces the structure must sustain and resist in order to remain upright. With this, of course, goes an inspection during the process of erection, a task generally performed with no great difficulty, although, it is true, it is often shirked and often dishonestly done. But the concrete construction calls for especial skill and care in applying the concrete, and builders in this material have awakened to the fact that it can only be properly done by workmen of a high grade and with most rigid inspection in every part of the work by the foremen and overseers. While this type of building is but in its infancy, it has already been realised that special care must be taken or it will fail to yield compensating advantages in such essential matters as economy and safety.

The Practical Exemplar of Architecture—XIV.

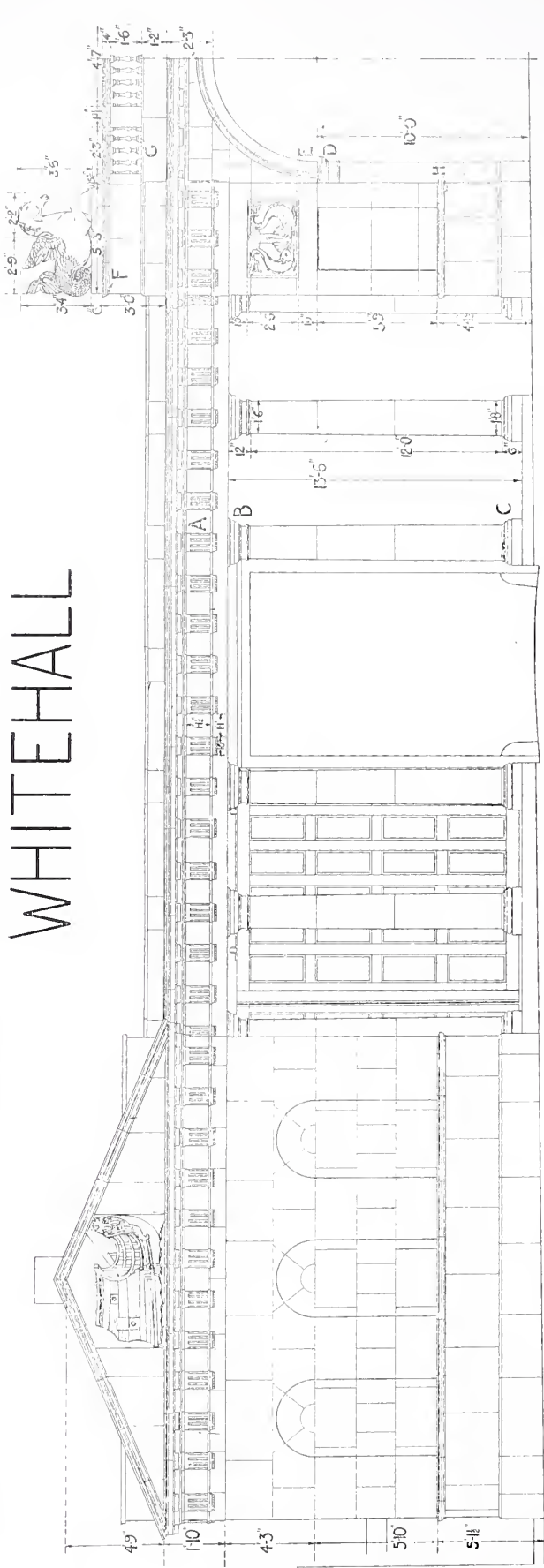


*Photo: York and Son.*

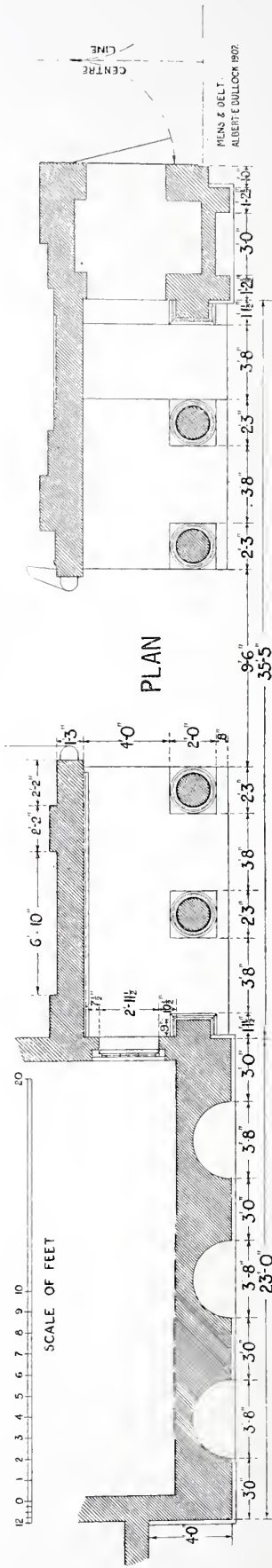
THE ADMIRALTY SCREEN, WHITEHALL, LONDON.



SCREEN TO THE OLD ADMIRALTY BUILDINGS  
WHITEHALL



HALF ELEVATION



PLAN

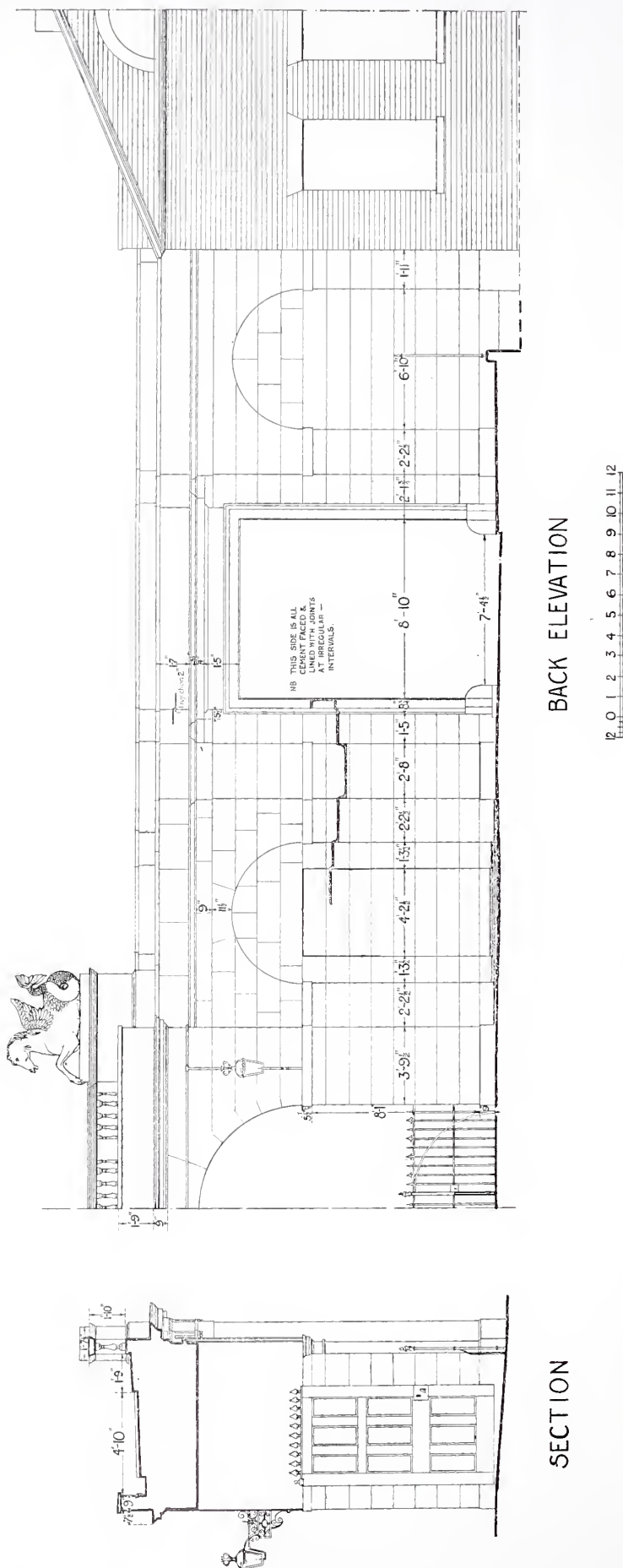
MEASURED AND DRAWN BY ALBERT E. BULLOCK.



*Photo. Arch. Review Photo. Bure. u.*

DETAIL OF THE CENTRE, THE ADMIRALTY SCREEN, WHITEHALL.





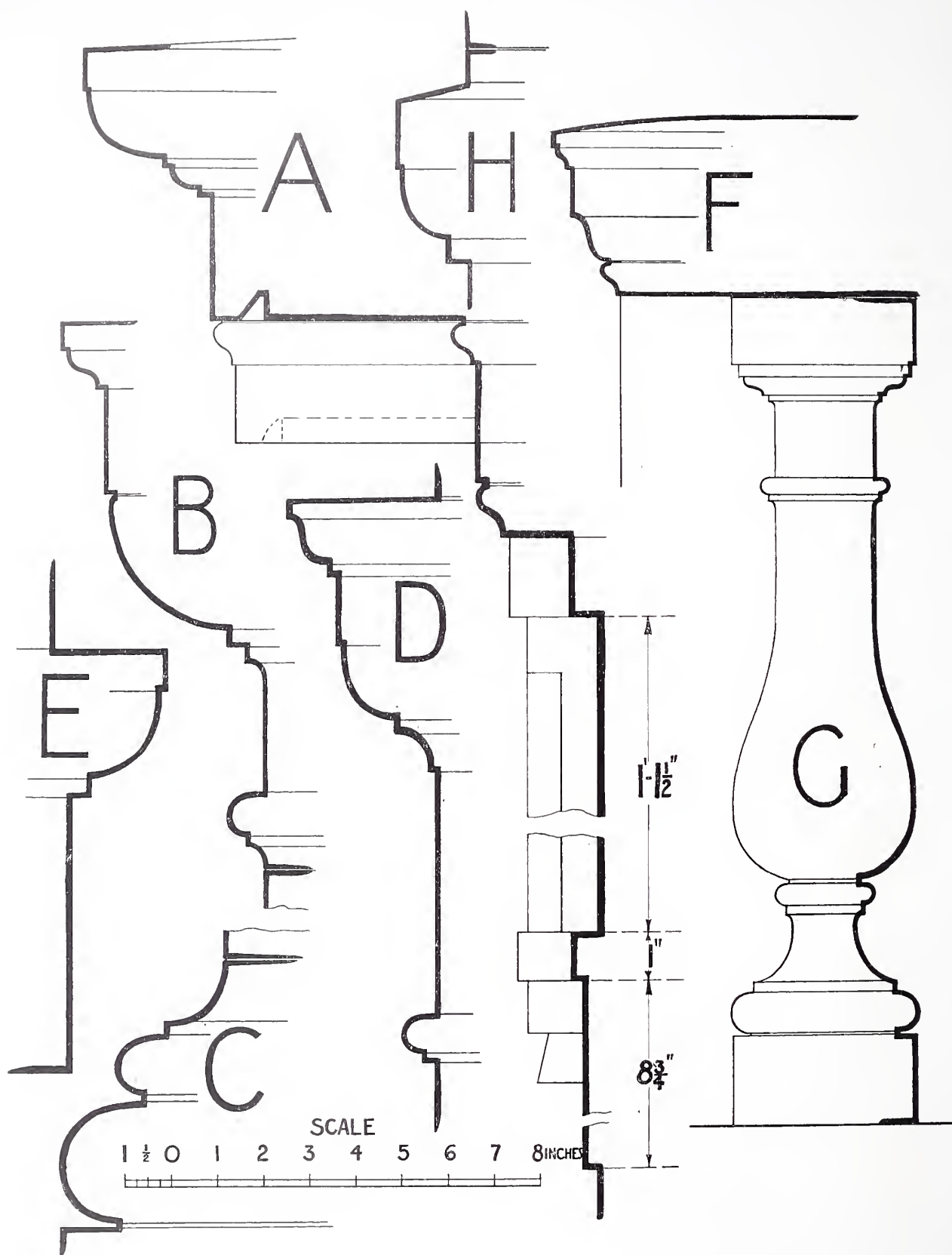
ELEVATION OF HALF OF THE OLD ADMIRALTY SCREEN, WHITTHALL,  
MEASURED AND DRAWN BY ALBERT E. BULLOCK.



Photo: Arch. Review Photo. Bureau.

THE ADMIRALTY SCREEN, WHITEHALL.





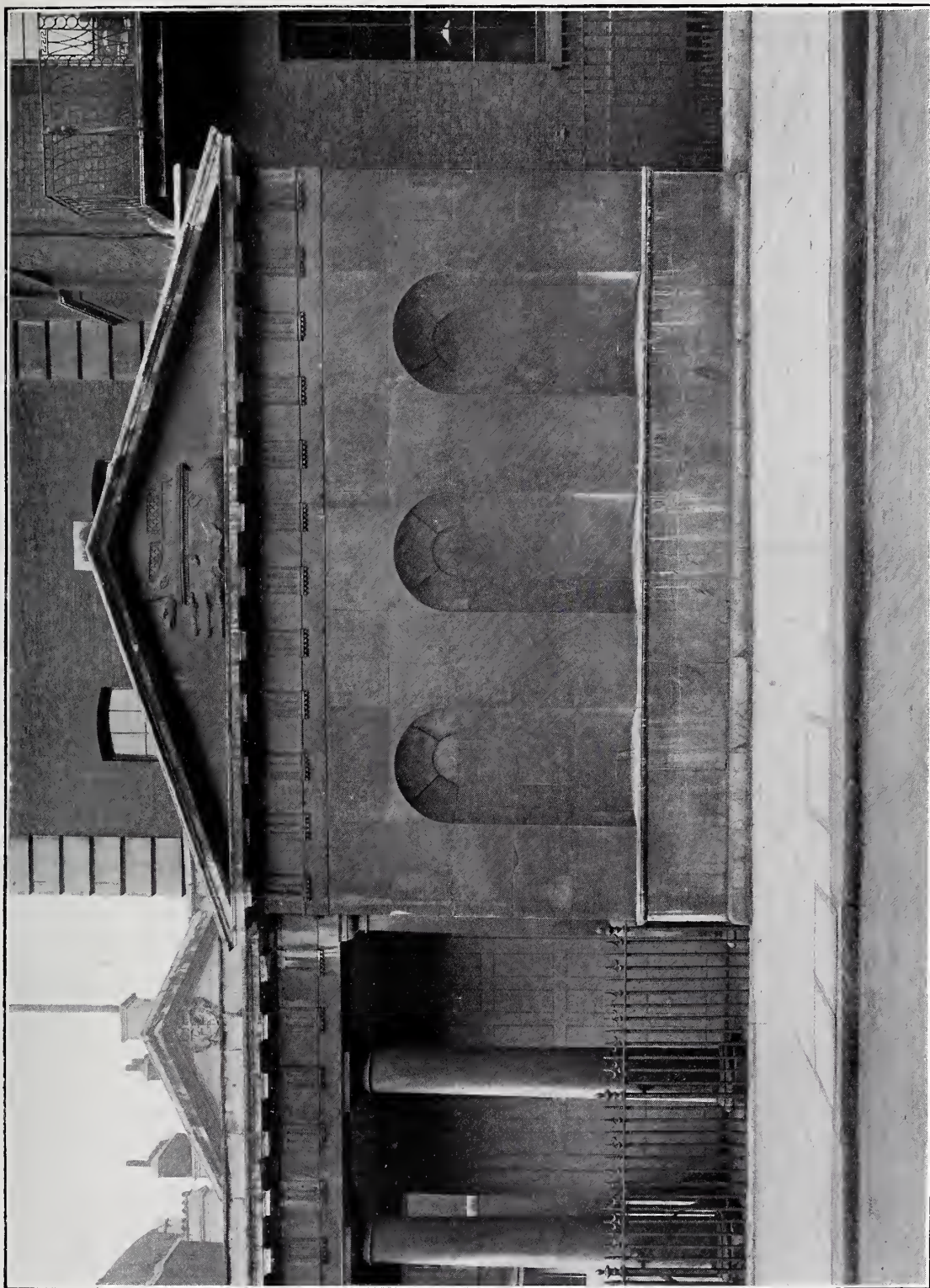


Photo: Arch. Revizor Photo. Bureau.

THE ADMIRALTY SCREEN, WHITEHALL. DETAIL.



# Notes from Paris.

## RECENT RESIDENTIAL BUILDINGS.



AMONG the new buildings worthy of notice is one standing at the corner of the rue St. Simon and the rue de Grenelle. The chief peculiarity of this structure lies in the utilisation of a piece of ground of very meagre depth, the price of which was as high as 680 francs per square metre. In order to make the most of the ground Mr. H. Deglane, the architect, was obliged to decrease the thickness of the walls, and to employ steel construction in the interior, in order to obtain the courtyard and outlook according to the rules of construction in Paris.

The cellars in the building and under the courtyard comprise space for the lift machinery and for high-pressure steam heating and the electric machinery. On the ground floor are two shops, the concierge's lodge, and a flat. The entresol and the four storeys above each contain two flats, the fifth floor has only one flat and servants' bedrooms. The sixth floor is divided entirely into servants' bedrooms.

The front of the ground floor, forming the basement, is of stone; the storeys are of light red brick, harmonising very well with the colour of the stone employed on the storeys. The stone is used only for the balconies, consoles, and casements; the crowns of the lintels on the first floor are decorated with sculptured heads, as are those of the second floor, which has also the window-sills ornamented with panels of sandstone. The front comprises three window bays, the one forming the angle being surmounted by a slate roof; each of the others is capped by a projecting dormer window framed in woodwork.

In the vestibule is mosaic decoration in a framework composed of classic columns interlaced with

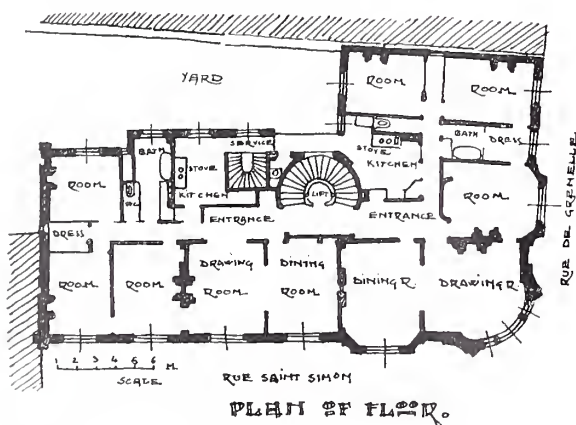
foliage, which we find repeated in the frieze coping of the staircase and the grating of the lift. The entrance door of forged iron is decorated with hollyhocks climbing up the vertical squares. The total cost of the construction was 366,100 francs, or 1,144 francs per sq. metre, *i.e.* £38 5s. the sq. yd.

Another noteworthy house is in the Avenue Victor Hugo, Paris. The architect, Mr. C. Plumet, has drawn up an excellent scheme for a piece of ground having a very narrow frontage and a great depth, and has thus placed at the further end of the ground a small house overlooking a big courtyard. Each storey comprises a large flat, consisting, in the front, of a large drawing-room, small drawing-room, and a billiard-room. All the bedrooms, with dressing-rooms, open on to a long



ENTRANCE DOORWAY. BUILDING AT CORNER OF RUE ST. SIMON AND RUE DE GRENELLE, PARIS.

H. DEGLANE, ARCHITECT.

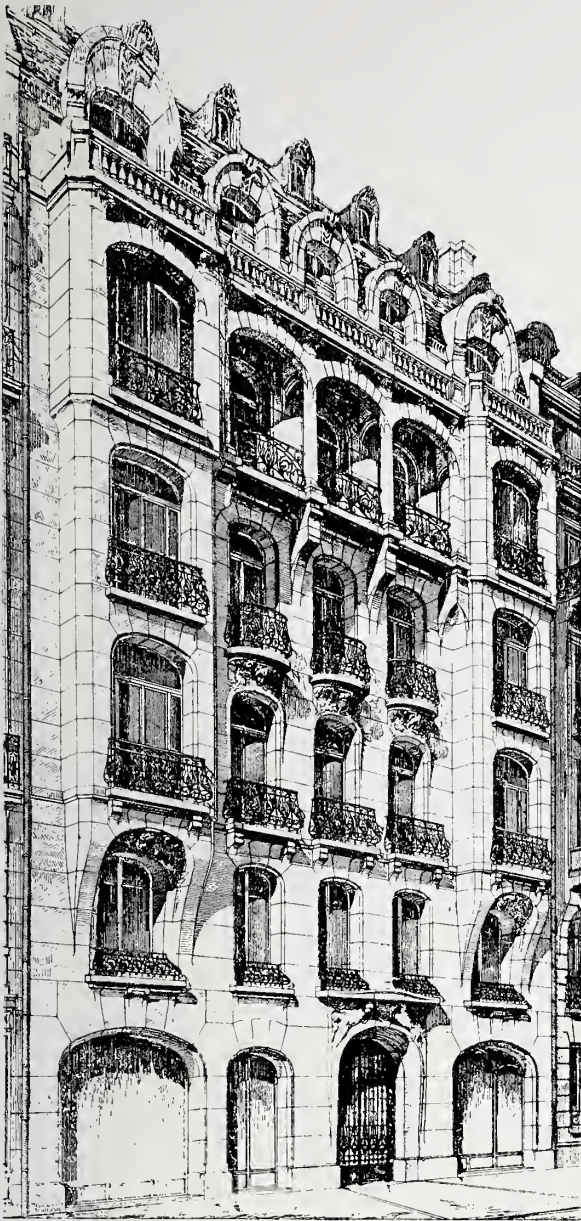


BUILDING AT CORNER OF RUE ST. SIMON AND RUE DE GRENELLE, PARIS.  
H. DEGLANE, ARCHITECT.

corridor, overlooking the large courtyard referred to above. On the ground floor are two shops, the concierge's lodge, and a small flat.

The symmetrical façade boasts two bow windows on the fourth floor. The entire building is of stone, and the balconies of wrought iron, except the balustrade of the fifth floor, which is in stone. The roof is slate. The only decoration on the façade is the coping of the entrance door, of the overhanging bow windows, and the three crowns on the second floor.





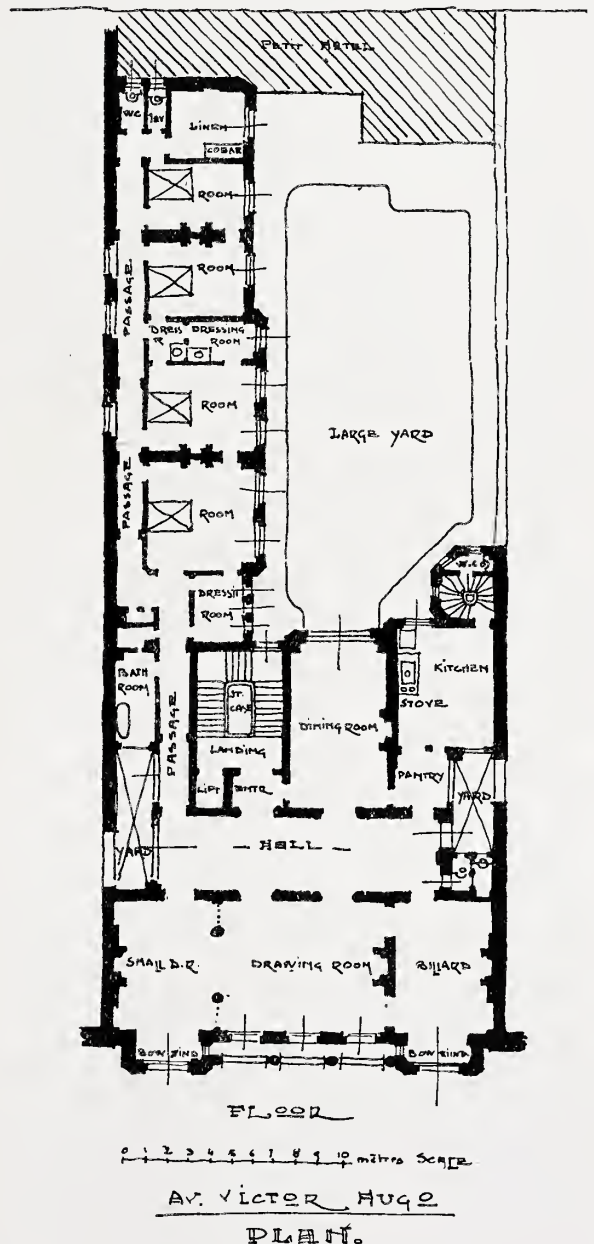
RESIDENTIAL BUILDING IN AVENUE VICTOR HUGO.  
C. PLUMET, ARCHITECT.

A similar building is situated at 10, rue Legendre. The storeys of this house are arranged as luxurious flats; the drawing-rooms alone occupy the front, which is of small dimensions. The dining-room and four bedrooms overlook a courtyard 9.30 metres by 4.85 metres. The front has an original appearance owing to the superposition of the windows of the second, third, and fourth floors, interrupted only by the retreating lintels. There is no sculpture except on the balcony handrails and the framework of the front door, the windows of the fifth floor, and the coping of the large dormer window on the sixth floor, whose wings extend to the two back arches. The stone construction has no ledges except the high arches formed by the superposed windows, and the balcony of the dormer window on the last storey.

Finally, it will not be out of place to say a few words about a building which is interesting from an architectural as well as from a social point of view, and which unites the qualities of economy, comfort, and form requisite at the present day. This is the Home for Post Office, Telegraph, and Telephone Girls, 41, rue de Lille, Paris.

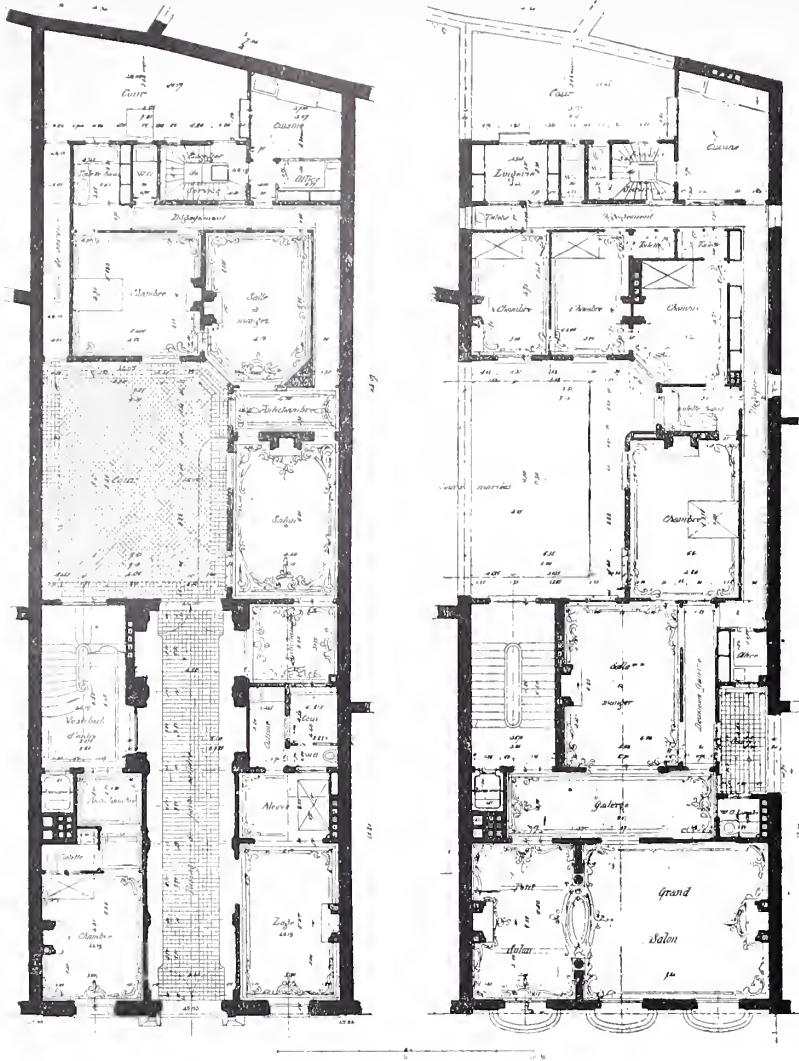
The object of the architect, Mr. Bliault, was to spend nothing on decoration, bearing in mind the principle of the architects of the Middle Ages, that "materials of construction form the only decoration." The exterior aspect was regarded as second to the interior requirements, and the entire work was designed by the architect, including the construction, furnishing, lighting, &c.

Four hundred metres of surface on the ground floor is occupied by large communicating rooms, 5 metres high, and lighted by big bays. Here there is a restaurant, 250 metres square, with solid



C. PLUMET, ARCHITECT.





RESIDENTIAL BUILDING, 10, RUE LEGENDRE, PARIS.  
J. HERMANT, ARCHITECT.

pillars, entirely undecorated, and forming the supports of the building. A large verandah, facing south, overlooks the garden, 300 metres square, and decorated in the French style, which is used as a resting-place, for work, and for tea. On the ground floor is also a reading-room, music-room, and the directress's office. All this floor is paved with squares of mosaic marble, as also is the basement. The basement consists of lavatories, cloak-rooms, &c., connected with the ground floor by means of a wide stone staircase. On one side are the kitchens, offices, storerooms, plunge baths, heating-rooms, linen closets, box-rooms, &c. These two floors form a bright and simple gathering-place where the young girls can feel at home. Mr. Bliault's design was inspired by the admirable "Martha Washington" Club at New York, and the club which has just been opened near Westminster Abbey in London.

The seven upper storeys are each composed of eighteen rooms connected by large well-lighted corridors; in the centre of each storey are lavatories with hot and cold water, bathrooms, douche-

rooms, w.c.'s, rooms for brushing clothes and boots, with shoots for rubbish and dirty linen, telephone, fire service, &c., &c. Each landing on the staircase is arranged as a little sitting-room with tables, &c., and is 4 metres by 5 metres in size.

There are altogether 117 rooms, most of them having little balconies or loggias. Each bedroom is painted a light colour with dull finish, and occupies an area of 18 square metres, and has at least 30 to 35 cubic metres of air space. The angles of the ceiling are rounded, and decorative mouldings contain the electric wires.

For the construction the architect has made use of cement, as being advantageous from an economical point of view, and as giving the maximum of resistance for the minimum of space. The general effect of the façade is simple, and has a comfortable homely appearance very suitable for a residence intended for a great number of people at a low tariff.

\* \* \* \*

#### DECORATION AT THE SALON.

As is usual in the month of May, two Salons are open, where may be seen some of the best work of the painters, sculptors, and architects. For us architects the decorative part

of these exhibitions is the most interesting. Let us commence, therefore, with the "Artistes français" in the Great Palace on the Avenue Alexandre III.

In the first room our attention is drawn to the works of the late master, Toudouse, with which the walls are covered. All these canvases, though of widely different periods, are of very equal merit. The decorative effect is the dominating feature of this Artist's work, and he treats most of his subjects as he would have treated glass windows—that is to say, each object is drawn with clear outlines, nothing on the canvas being left vague or misty; this method is the exact reverse of the work of one of our great painters at the "Nationale," which has been termed Whistlerean. We must, however, mention that these works have been executed for the Gobelin tapestry manufactory, where they will be used as models. The subjects of all these works are taken from French history, battles in Brittany, and the Hundred Years' War.

The "Combat des Trente" is a remarkable



study of hand-to-hand fighting in olden days. A horse, transpierced by an arrow, prancing wildly, rushes towards the enemy, dragging his rider with him. "The Death of Du Guesclin," and "Jeanne d'Arc and the Constable of Richemont" are in the same style, the reds of the banners and uniforms and the silver greys of the breastplates predominating. The "Predication d'Abeilard" and the "Mariage d'Anne de Bretagne" strongly resemble a well-known picture at the Sorbonne.

In quite another style we notice the triptych of Mr. Ribera, "Scènes Andalouses," and the "Piédestal" by Mr. Laparra. The "Piédestal" is an immense canvas representing the "Église des Invalides," against whose walls corpses are piled in heaps, corpses of soldiers evidently, who form a repulsive pedestal to the hero of wars gone by, seen dressed entirely in red, at the summit of this pyramid. On the ground, streams of blood pour from this mass of bones, while women weep, their feet bathed in the horrid mire. More calm, more reposeful, is Mr. Humbert's picture which represents Homer declaiming verses before a primeval assembly.

The next exhibits worthy of notice are in the new rooms, opened only this year, and as yet hardly known to and very little frequented by the public.

A commissioned work, by Mr. Grau, represents M. Fallières, President of the Republic, opening the Exhibition of Textile Industries at Tourcoing. It is a long panel, and we presume is destined for some town hall. Such a subject does not give much scope for the imagination of the artist, black coats, black coats, and still more black coats. Mr. Grau has attempted to relieve the monotony by introducing brilliant uniforms into the official retinue, and by placing in a corner of his picture a group of elegantly dressed women in light costumes. Flags and oriflammes of all colours float under a blue sky, and animate the scene somewhat. In the same room a ceiling by Mr. Omegua calls for passing notice.

Mr. Bremond, who has so skilfully decorated the Playhouse in London, exhibits a large canvas suitable for the decoration of a crèche. Rosy children play in a big shady garden, whilst the attendants sit by mending their clothes. The colours are bright, the ensemble is pleasing.

Very decorative are the large panels by Mr. Marret, the subjects being found in the outskirts of Paris. One represents children romping in a green meadow, while the mothers are seen washing clothes; the other, labourers in a vegetable field. A very pleasing order from the Conseil Général of the Seine.

Finally, let us mention the glass-work and

windows by Mr. Guillemin, very agreeably representing cliffs and sea-shores. In the same style are the landscapes by Mr. Delon; Mr. Mette's



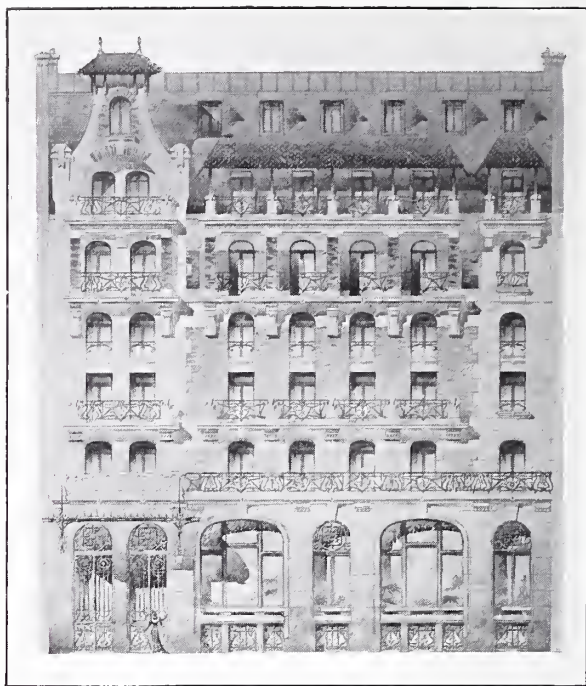
RESIDENTIAL BUILDING, 10, RUE LEGENDRE, PARIS.  
J. HERMANT, ARCHITECT.



boats and the cocks by Mr. Labouret are also worthy of attention.

At the Salon of the Société Nationale des Beaux-Arts decorative painting is also very well represented. First are the exhibits of Mr. Albert Besnard, two large decorative panels destined for the cupola of the Petit Palais: the one entitled "Pensée," the other "Matière." The "Pensée," from the higher regions, rules life and death, and in the clouds and spreading mists a shadowy sphere supports a vague, seated form, none of whose features are visible, the head being half hidden in the fog. This is the "Pensée." In the lower corner, to the left, stand a man and woman, nude, expressing life; beside these two persons is a third, draped in black, the hand raised, the face mournful; it is Death. The general impression of this work is depressing, although it is undoubtedly well executed. The subject of "Le Matière" is brighter and more animated. A demon in the centre of the panel holds a woman in his sinewy arms, and this group appears to be wandering in space. Above them a storm cloud darts lightning flashes.

A little further on we see four decorative panels, executed by Mr. Gaston la Touche for the Minister of Agriculture. These are intended to decorate the oval salon which once belonged to Madame du Barry. They represent "Beauty of Soul," "Tenderness of Heart," and "Maternal Love." There is in these four panels a piquant mixture of reality and imagination, the whole enveloped in a golden light, cleverly—a little too cleverly—executed.

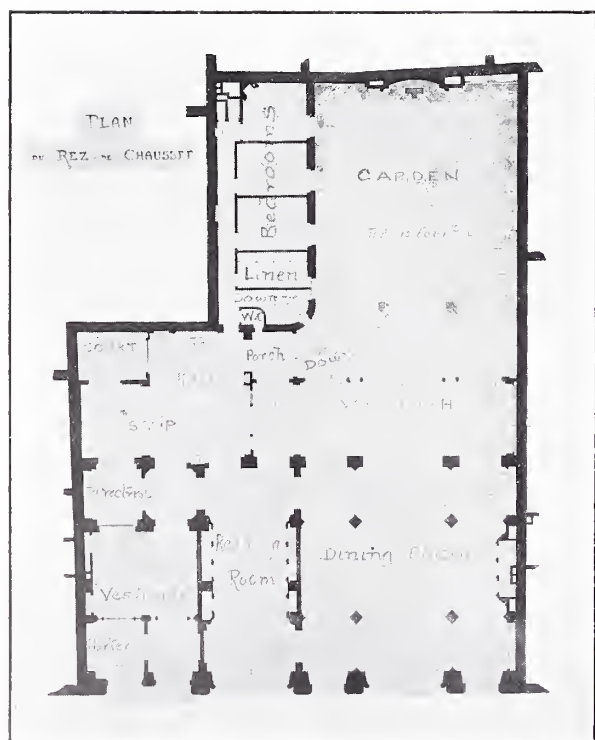


HOME FOR POST OFFICE, TELEGRAPH, AND TELEPHONE GIRLS, 41 RUE DE LILLE, PARIS.

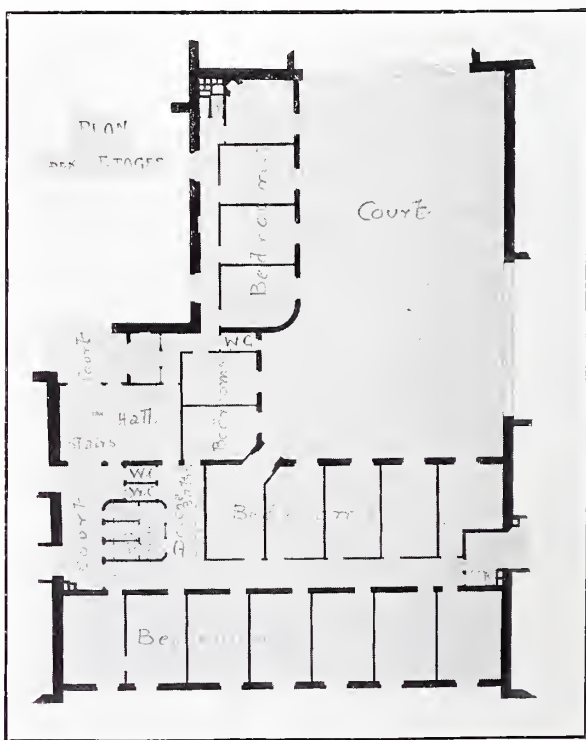
M. BLIAULT, ARCHITECT.

We mention only the principal decorative works, but it is interesting to stroll through the section devoted to so-called "Arts décoratifs," where are interior decoration, furniture, windows, hangings—the beautifying of the house—artistic comfort in the home.

ROBERT MALLET STEVENS.  
JACQUES ROEDERER.



41, RUE DE LILLE, PARIS. M. BLIAULT, ARCHITECT.



# A Sketch of Irish Ecclesiastical Architecture.

## VII.—INCREASED FOREIGN INFLUENCE. PART II.



THE change (which had begun in the previous century) was not only in the style of the buildings, but in their scale and in the general character of an Irish ecclesiastical settlement. Even in the Romanesque period Irish builders had for the most part been content to beautify old churches—to substitute a more ornamented doorway, as in the west end of the Cathedral at Clonmacnoise; to erect or rebuild a chancel, as in the Cathedral at Glendalough; or to add one more building of small size, like Cormac's Chapel, to the group already existing on the site. In the thirteenth century the change which we have already seen beginning at Mellifont and Jerpoint spread more widely, and a single large church on a grander scale was built either on a fresh site altogether, or on or near a site hallowed by old associations, in the latter case usually swallowing up some or all of the older group already existing, as at Kilkenny, Kildare, and Cashel; the same change took place (partially) at Iona. To the Cistercians were soon added other Orders, particularly the Friars—Franciscan, Dominican, Augustinian, and Carmelite—who acquired a great and lasting reputation in Ireland. These too

would bring with them foreign ideas as to the scale proper for a church, and the preference for one large church to a group of small ones; the domestic buildings also tended to assume a more solid and dignified character.<sup>81</sup> The English bishops of the Pale had similar views, and the Irish princes and bishops were not inclined to be behindhand either in reverence for the new orders or in supporting what they at least would consider an advance in the dignity and beauty of churches. Thus many of these were built in the thirteenth century, and the Gothic of that period gained a hold upon Ireland, traces of which remain until Gothic Architecture died altogether. Since it is not the object of these papers to write a history of the Gothic styles in general, I shall speak only of those main points which seem to give character to Early Irish Gothic, and of certain exceptional buildings of this date to be found in Ireland. It should be noted that the use of the round abacus shows, what is tolerably plain otherwise, that it was English Gothic from which (in the main, at all events) the Irish worked as an example.

Though the Irish churches built at this period reached a size unknown before in the country, the cathedrals are small compared with those of England, and the abbey<sup>82</sup> churches smaller still. St. Patrick's Cathedral, the largest church in Ireland, is 286 ft. long inside; St. Canice's, at Kilkenny, measures 226 ft.; the length of Lichfield Cathedral is 370 ft. And it is not only in length that Irish churches are on a smaller scale. Crypts are very rare indeed. There is very seldom a triforium, and often no clerestory. Aisles are not regarded as necessities; Cashel and Kildare Cathedrals have none; the abbey of Lorrha, near Portumna, has neither aisles nor transepts;<sup>83</sup> other churches have one aisle, usually on the south side of the nave; chancel aisles are quite exceptional. But transepts are common; that on the south side of the Black Abbey (Dominican) at Kilkenny is of extraordinary length—longer than the nave—and has a western aisle, added in the fourteenth century; of course a transept is well adapted for placing correctly the large number of altars required by a monastery or friary (as is the Chapel of the Nine Altars at Durham); at the same time, especially if it is extended to the west, it makes the church better suited for preaching.

Ireland has never been a wealthy country; and even in its more important churches economy was usually studied, not only in scale, but by simplicity; further, Cistercian churches were (at least in the earlier centuries of the Order's history) built simply, as a



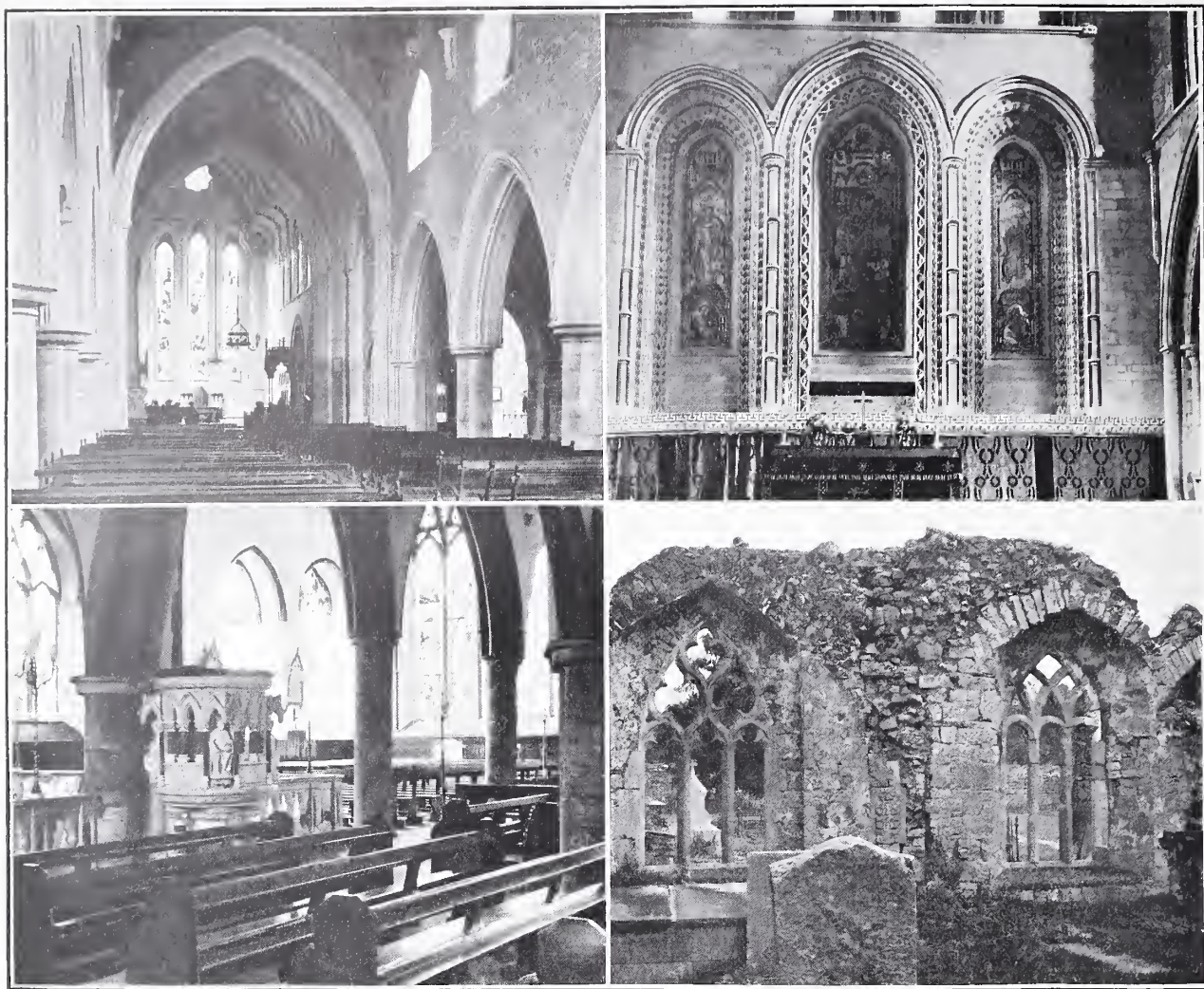
"DECORATED" WINDOWS, FETHARD ABBEY.

<sup>81</sup> The early domestic buildings of Irish ecclesiastical establishments were, for the most part, of wood.

<sup>82</sup> In Ireland ancient friaries too are, I think invariably, spoken of as abbeys.

<sup>83</sup> This gives the church an appearance of disproportionate length from the outside; inside, it was divided by a stone screen.





KILKENNY CATHEDRAL, FROM THE WEST.

SOUTH TRANSEPT, BLACK ABBEY, KILKENNY.

ST. DAVID'S CATHEDRAL, EAST END.

"DECORATED" AND LATE WINDOWS, ENNIS ABBEY.

matter of principle, and their influence upon others as an example would be considerable. Christchurch and Cashel<sup>84</sup> Cathedrals, indeed, have a large amount of carving, but in most churches the extent of this is very limited, as at Kilkenny, though here the arches as well as the capitals are moulded. In Kildare Cathedral many of the shafts inside the windows are turned in to the wall a short distance down from the capitals. Hore Abbey (founded for Cistercians about 1270), below the Rock of Cashel, is plainer than almost any parish church in England, and there are other important Irish churches which are nearly as plain. The sparing use of buttresses is perhaps more likely to be due to conservatism; it is rare in Ireland to find them at regular intervals along the walls;<sup>85</sup> at Kilkenny, for instance, they are used at the corners only; at Ardfert Cathedral there are fewer still.

The skill of the builders being mainly concentrated on the most important parts of the church has produced some very beautiful chancels; the arrangement of con-

tinuous high windows, with wide splays, on one or both sides of the building—as at Cashel and Ardfert—is an excellent feature. The east wall is often occupied from side to side, and almost up to the roof, by a group of lancet windows (with their splays), three in number at Ardfert Cathedral, five at Ennis and Ardfert Abbey, seven in the Franciscan Church at Kilkenny; it is interesting to find that Ardfert Abbey (a Franciscan friary) has a chancel which bears a very close resemblance, in a plainer form, to that at Ardfert Cathedral, just as successful church towers were closely (and avowedly) copied by neighbours in Suffolk and elsewhere. Such an arrangement of windows would give a liberal amount of light, or, what was perhaps more in the mind of the builders, a large field for stained glass; we hear that the Franciscan friary at Ennis, when it was repaired (or rebuilt) in 1305,<sup>86</sup> received from its benefactor, besides beautiful book-cases, furniture and vestments, "blue painted windows"; the east windows (or "window," as they are often

<sup>84</sup> Cashel Cathedral is said to have been repaired in the first half of the fifteenth century, and again after a fire in 1495; but it is not easy to find many distinct traces of this in the church itself.

<sup>85</sup> One of the exceptions is at the Carmelite friary outside Kildare, where they seem to have been an afterthought, as they are not bonded into the wall.

<sup>86</sup> It also appears to have received a large benefaction, partly "for enlarging and beautifying their house," about A.D. 1311.





SEDILIA IN LIMERICK  
CATHEDRAL.



TRANSEPT CHAPELS,  
BALLINTOBER ABBEY.



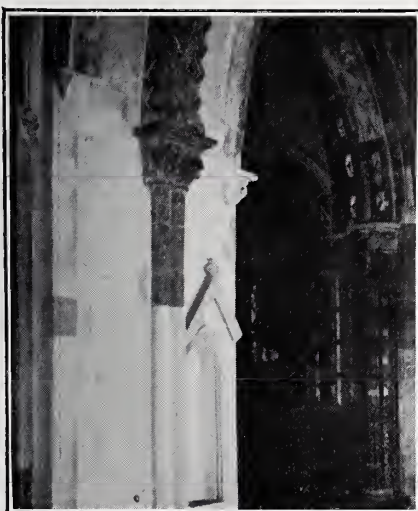
ARCH, BALLINTOBER ABBEY.

called collectively) at Kilkenny were filled with specially fine glass by Bishop de Ledrede half a century later. In many cases it is difficult to see what was practically to be gained by substituting the broad single window of later Gothic, as, for instance, in the Dominican Church at Cashel, when, in the fifteenth century, it was repaired after a fire. The high lancet windows would obviously make a habitable room over the chancel an impossibility.

At Ennis the three central lancets under one arch practically form lights of a single window. At Hore Abbey, and at Kilkenny and Cashel Cathedrals on the outside, the clerestory windows are quatrefoils. In the north transept at Cashel the central lancet in the triplet is actually the shortest, so as to leave room above for a curious circular window, having quatrefoiled tracery in the opening; on the outside the panel framing this had nine "foils,"<sup>87</sup> the quatrefoil being made to fit these; hence its curious appearance on the inside. At Kilkenny, as we have seen, quatrefoils are in the aisles combined with lancets so as to form early plate tracery,<sup>88</sup> and there are other more or less similar examples else-

where in Ireland; the east window at Feenagh shows a more advanced stage. But lancets, which were so effectively used, maintained an existence in Ireland long after the thirteenth century.

Nor is this the only sign of that conservatism in Irish architecture which we have noticed already, and shall have to notice again. Besides the regular "dog-tooth," a simpler nail-head ornament—like "dog-tooth," but without under-cutting—which is used in English Romanesque building, is frequently found in Ireland, not only in Transitional work, but in churches or monuments of definitely Gothic character; as, for instance, round the cap of a pillar in Cashel Cathedral—around others there are rope-moulding and beads. At the east end of Ardfert Cathedral one capital is ornamented with a simple interlaced pattern, while others are carved with flowers of most natural appearance. And in the north wall of the choir at Cashel there is a still more curious mixture, the filleted moulding round a doorway being cut into "billets"; the general effect is obvious, but on close examination the ornament appears as far more elaborate, since a



SOUTH AISLE OF CHOIR,  
CHRISTCHURCH, DUBLIN.



WEST FRONT,  
KILKENNY CATHEDRAL.



SOUTH SIDE OF NAVE,  
KILKENNY CATHEDRAL.

<sup>87</sup> See illustration, Article IV., Part II.

<sup>88</sup> A print in Harris's edition of Ware's *Works Concerning Ireland*, Vol. I., shows a similar window in the castle forming the west end of Cashel Cathedral; this part has now fallen.

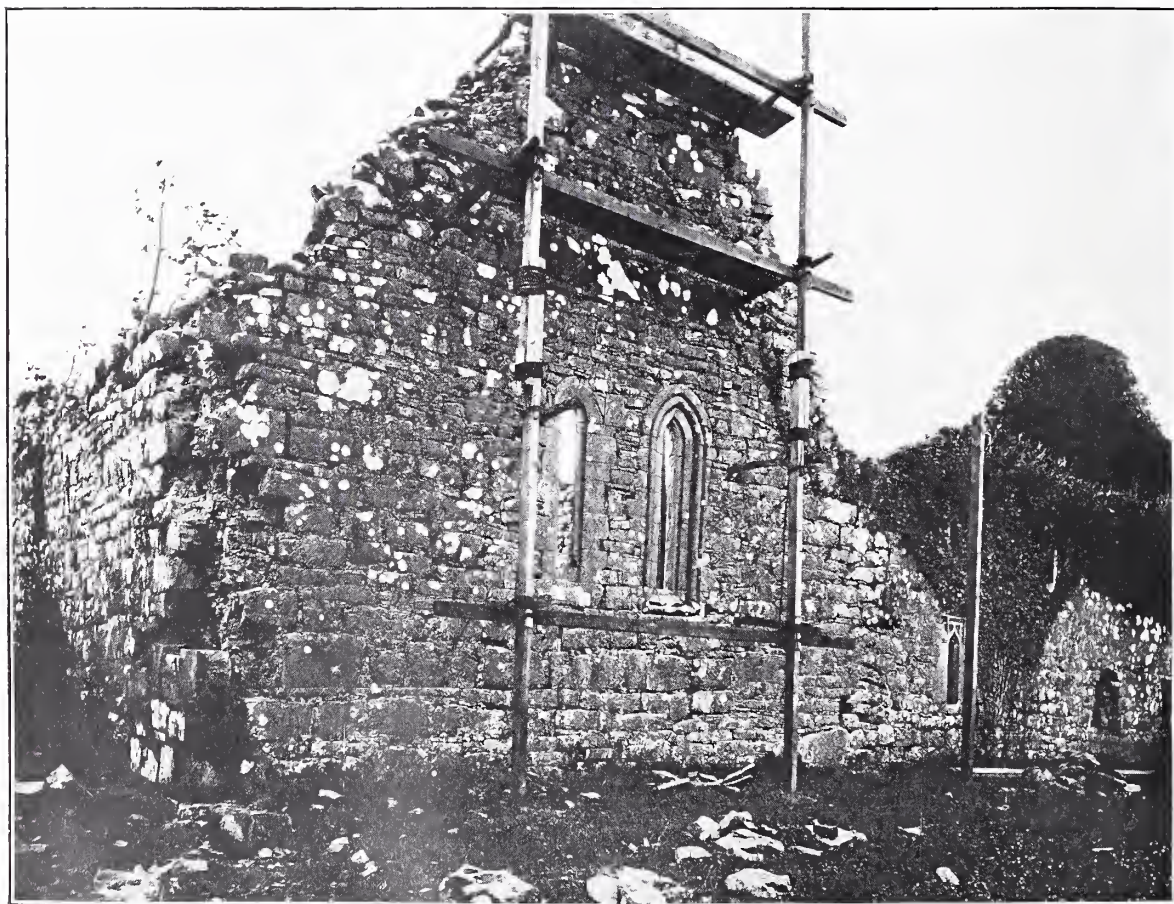


smaller and lower moulding joins each side of every "billet" to the next one—the larger moulding covering up, as it were, the two smaller ones.

The slight importance attached to formal symmetry, apparent in the circular north transept window at Cashel Cathedral, is also visible in the varying arrangement of the clustered pillars at the crossing there, which is at no two corners alike. We have seen the same freedom in the varied ornament of the three sister-windows at Ballintober; it is equally plain in the east wall of one of the churches on Inislauraun, an island in Lough Ree, where the two windows are unlike in size as well as in elaboration.<sup>89</sup> It is shown also in the disproportionate length of the south transept in the Black Abbey, Kilkenny, already mentioned, and at Cashel the nave is shorter than the choir.

It was, of course, not in Ireland only that churches were in some cases so constructed as to be fortresses at the same time. Near the Scotch border and in Wales, as well as in Ireland, the church tower is often obviously intended to serve that purpose of defence which fixed its ordinary position over the west door, the principal entrance. At Climping, near Littlehampton, a Tower attached to the south transept has evidently been fitted with a drawbridge, though the moat has long since been filled up, and the

precincts of Lichfield and St. David's Cathedrals were fortified; so also was Arbroath Abbey. The same idea is in various Irish churches carried out in interesting ways. Cashel was from early times a hill fortress (somewhat like Erfurt in Germany), and such it remained after it was dedicated to ecclesiastical uses, the Cathedral being so designed as to form a citadel to this. Its walls are in some places six feet thick: Cormac's Chapel and the Round Tower were joined on to it; a castle<sup>90</sup> forms its western end; the passages in its walls, admitting the defenders to all parts of the fortress, were themselves secured at several points by "murdering holes" commanding them from above. Kildare Cathedral, too, is constructed as a fortress. There are steps on the top of each gable to give the defenders access to any part of the building that might be attacked. There is also an exterior line (or thickness) of wall which, when joined to the main wall of the church, forms buttresses, and is carried on arches over the lancets. But above the windows there is a narrow slit between the two lines of wall, that those standing on the battlements might drop stones, or pour molten lead, or shoot arrows upon any who tried to enter at the windows.<sup>91</sup> A fortified church at Royat in Auvergne is built on the same principle.<sup>92</sup> In the church—apparently of the thirteenth century



EAST END OF CHURCH ON INISLAURAUN, LOUGH REE.

<sup>89</sup> There are two east windows of different sizes in an ancient church on Eilean Mor, an island off the Knapdale coast.

<sup>90</sup> This was to a considerable extent "restored" in the fifteenth century.

<sup>91</sup> This is plain also in the old views of the ruined cathedral before restoration. I could not thus verify the steps, though I have little doubt that they are correctly reproduced.

<sup>92</sup> See Fergusson, *History of Architecture*, Vol. I., p. 495.





MUCKROSS ABBEY, FROM THE SOUTH-EAST. FIFTEENTH CENTURY.

—built on to the east end of the Romanesque chancel at Tuam, there is something similar, but in appearance only, for there are no slits, the projecting wall being merely for ornament, as are battlements upon screen-work in England. The elaborate Irish battlements, at once useful and ornamental, are generally attributed to the fifteenth century. Many of this pattern were certainly built then upon towers and elsewhere, but it would perhaps be difficult to prove that something similar was not in use before; they are very like the battlement ornament of Irish Romanesque architecture and the piscina in Kilkenny Cathedral mentioned above.<sup>93</sup> The same uncertainty as to date attaches to some other features in the fortification of Jerpoint Abbey, which are for the most part purely practical. Over the door opening into the north aisle (the only entrance to the church except from the monastery, which is on the south side) is a “bartizan”; west of this is a piece of wall jutting out from the church, pierced by a gateway with a flattish pointed arch; the wall is thick, and has battlements on both sides; it shows no sign of having abutted on anything at its outer end. The west end of the north aisle is defended, or taken in, by a wall which runs from the north-west corner of the aisle to the north-west corner of the nave, much as Cormac’s Chapel is joined to the Cathedral at Cashel. The

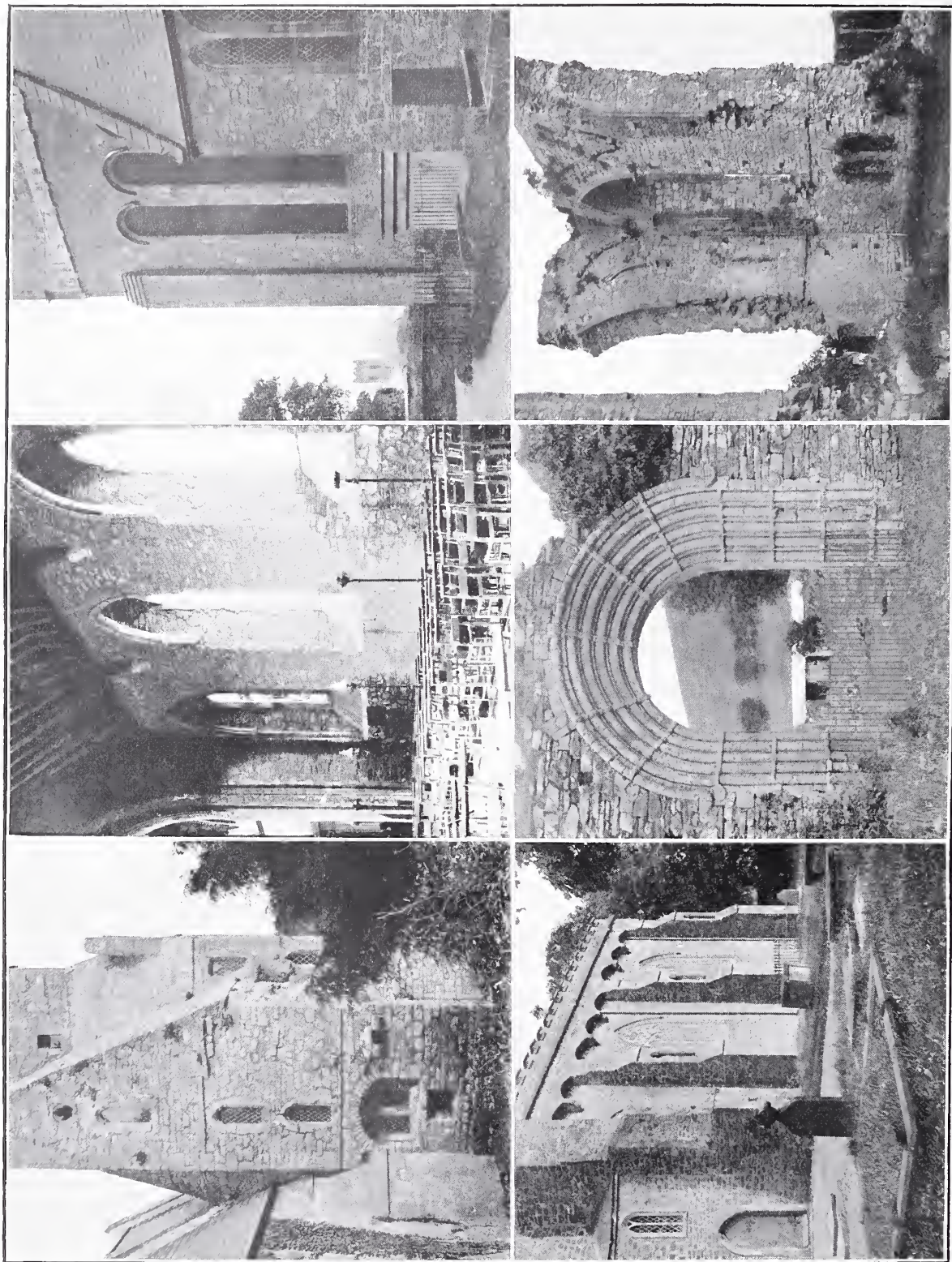
Abbey of Kells (the Kells in Co. Kilkenny) was placed in a fortified enclosure joining on to another equally fortified, known as the “Burghers’ Court”; it was founded in 1193 (Austin Canons being brought there from Bodmin), much altered in later times.

A still more interesting building, as reproducing the old Irish combination of church and living-rooms under one stone roof, is St. Doulough’s Church, near Dublin. St. Doulough lived about the year 600, and no doubt his oratory or his cell (which probably at one time resembled *Leaba Molaga*, or “St. Declan’s House” at Ardmore)<sup>94</sup> was the forefather of the present building, erected upon the same site, and containing in its western compartment on the ground floor a mass of masonry known as the tomb of St. Doulough, which served as an altar. In 1406 its chaplain was *anachorita inclusus*, and as “there were no sufficient means to support him and to repair and adorn the said place,” an indulgence was granted by the Archbishop of Armagh to those contributing towards these objects. About 1506 a chantry worth £4 annually was established there. The church attached on the north was rebuilt in 1864, though it has obviously succeeded an earlier one. But the southern part, out of which the tower springs (called in Dr. Reeves’s time the “Castle,” as opposed to the “Church” adjoining it), appears to be mainly of the

<sup>93</sup> There is a cope-box under the chapter-house at Wells which has a similar ornament; this may be a coincidence, or the pattern may be derived from Ireland.

<sup>94</sup> See Articles II. and IV., Part I. (view of Ardmore)





ST. DOULOUGH'S CATHEDRAL FROM  
THE WEST.  
THE CHOIR, TUAM CATHEDRAL.

NAVE, KILDARE CATHEDRAL.

WEST DOORWAY, STRATA FLORIDA ABBEY.

NORTH-WEST CORNER OF KILKENNY  
CATHEDRAL.

CHOIR OF CATHEDRAL, NEWTOWN TRIM.



thirteenth century, with some windows of the fourteenth century or later. Besides the room in the tower, it contains two chapels on the ground floor, and a long room which is provided with a fire-place on the top storey; by raising the floor in the western part of this and lowering the ceiling of the chapel below, another room is added between the two storeys; there is also a sort of penitent's bed, much like a berth on board ship, opening off the stairs. Though the name "Castle" was most naturally given to the building from its general appearance, there does not seem to have been any definite intention of fortifying it.

There is comparatively little pure "Decorated" work in Ireland. Types of window tracery seem to have been imported ready developed, though they were varied locally; but probably most of the traceried windows in Ireland were built in the fifteenth century. It appears that thirteenth-century architecture was still the prevailing style there at least for some time after 1300 A.D. In 1315-1318 Edward Bruce's invasion brought a large part of the country to a state of the greatest misery, permanently reduced the control of the central government, and led the way to a further series of disorders. It was also in the fourteenth century that the Black Death ravaged Ireland. It is therefore not surprising that but very few new monasteries should have been founded during this period; and thus the older foundations, whose means were curtailed by the state of the country, would also be deprived of an example and of emulation, leading to what has been called "silent re-building." Some "improvements" however—according to the later fashion—there certainly were; churches would be brought up to date where the means were forthcoming. Thus the small Norman windows in the east end of Jerpoint Abbey Church were replaced by a large Decorated window edged, both inside and outside, with ball-flower. The Augustinian Abbey of Fethard (Co. Tipperary) retains several old windows of fourteenth-century character. The Parish Church at Callan has a good "reticulated" east window (cusped), and another of like style built into its tower. There is a similar window in the transept at Ennis. The transept of the Black Abbey at Kilkenny ends in a magnificent Decorated window (which superseded a set of lancets), and has others along its east side of similar date, though one of these has very unusual tracery—the aisle added on its west side about the same time has been already mentioned. The Sedilia of the Magdalen Chapel in Limerick Cathedral were probably built between 1360 and 1369; such twisted columns are most rare in England at the time, in Ireland several instances of them are to be found somewhat later; they

may have been either a revival of Romanesque ornament, or reintroduced from Italy. There is a Decorated window in the tower of the Franciscan Abbey at Kilkenny, which is interesting as an early approach to those high, slender, plain, and often tapering towers of which many were built a little later on (they are most common in Franciscan Churches); these may well have owed something to a free imitation of the Round Tower, though they bear a general resemblance to some towers in Italy.<sup>95</sup> The one just mentioned has, as is common in similar examples, short stone roofs on each side, forming embryo transepts and acting as buttresses—the Irish stone roof died hard.

An interesting contribution of the fourteenth century was the (interior) chancel of the cathedral at Clonmacnoise. This conservative establishment had retained its group of small churches; and the cathedral, though repaired and beautified, had never been provided with a chancel. Early in the fourteenth century Tomultach MacDermott, chief of Moylurg (who died in 1336), "repaired or built the great church upon his own costs"; it is still known as *Teampull Mac Dermot*. We can tell with some exactness the extent of this "restoration." The outline of the walls remained unchanged; the *antae* and Romanesque west doorway were left; and a print of 1738,<sup>96</sup> when the north and east walls were practically perfect, shows only two very small windows in the north wall. But a chancel was contrived in the inside of the church towards the east by means of groining carried on pillars across it; there was a room over this. The two-light window near the south-east corner, of the simplest possible tracery (like those of the chapter-house at Lichfield, which are attributed to about the middle of the thirteenth century), is probably of the same date; this kind of window continues to be a very favourite type in Ireland during the fifteenth century, especially in its more elaborate form, in which, since the lights are more than two in number, the mullions, carried on to the arch, intersect.

There is a specially beautiful tomb, of fourteenth-century character, in the Priory at Dungiven (Co. Londonderry). The persistence of the "dog-tooth" ornament is noticeable as another piece of Irish conservatism. The quilted coats so clearly marked on it remind one of the monuments at Iona—the connection between Ireland and the west of Scotland is real and persistent.

ARTHUR C. CHAMPNEYS.

[The illustration of Muckross Abbey is by Lawrence, Dublin; the others are from photographs taken by the author, developed and printed by Messrs. Seaman, Ilkeston.]

(To be concluded.)

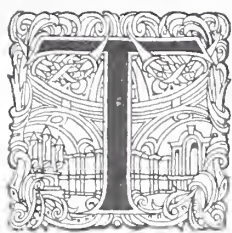
<sup>95</sup> See, for instance, Fergusson, *History of Architecture*, Vol. II., p. 359.

<sup>96</sup> Ware, *Works concerning Ireland*, edited by Harris, Vol. I., at p. 164.



# Chelsea Public Baths.

Wills and Anderson, Architects.



THE building illustrated is the outcome of a scheme decided on by the Chelsea Council after the larger scheme for which a public competition was held some years ago, and assessed by R. Norman Shaw, R.A., was abandoned.

In the original scheme, which is here illustrated, it was proposed to build three swimming ponds and a large number of slipper baths on the site bounded by King's Road and Manor Street, Chelsea, at a cost of £60,000.

The unusual condition that staircases were to be lighted along the entire length of one side was the origin of the courtyard plan in this case, as in no other way could this condition be met. The architectural treatment of the design was really determined by this comparatively unimportant condition, an odd instance of the far-reaching effect of what is apparently an insignificant clause. It is believed that, though a courtyard has been utilised previously in bath designing, this is one of the only instances in which it has been made an opportunity for architectural planning.

There seems, as has been pointed out by Mr. Cross in his able book on baths, no adequate reason why baths should not afford an opportunity for strictly architectural treatment while losing none of their convenience as buildings fulfilling utilitarian requirements. A further advance, while meeting with opposition from those used to the customary methods of swimming-bath design, would be to make the baths themselves architectural in character by covering them with curved roofs of ferro-concrete, having large segmental Roman windows at the sides and ends. Such a method would give all the light required, and would be productive of a practically indestructible building having the true elements of architectural dignity.

The scheme executed by the Chelsea Council was the result of a second and limited competition for a smaller scheme of baths to cost about £30,000 and to face Manor Street only, in order that the King's Road frontage might be utilised for extensions to the Town Hall.

It consists of the swimming ponds, the lengths of which are respectively 100 ft. and 97 ft., and about 100 slipper baths divided into four classes. The men's swimming bath, illustrated on p. 35, has a gallery; the ladies' bath is similar, but of smaller height without a gallery. Both are covered (as stipulated for in the conditions) with light iron roofs.

Space has been reserved in the basement for future Turkish baths (if subsequently required by

the Council), by carrying down the walls of the basement sufficiently deep for the purpose.

A novel feature of the scheme, due to the suggestion of the baths engineer, Mr. Alexander Macdonald, is the provision of a large storage tank under the entire length of the Manor Street front, which tank has been carried out in steel framework, expanded metal, and concrete by the New Expanded Metal Co., of York Mansions, S.W. The ponds of the swimming baths are also carried out in the same material.

The whole scheme, in accordance with the specific instructions of the Council, has been carried out in as inexpensive a way as possible.

The fronts are built of red brick and Portland stone. The whole of the constructional steelwork, including some very heavy box-girders, was carried out by Messrs. Powers & Deene Ransomes, Ltd. In all some 136 tons of steel were used. The roof-glazing was executed by the Standard Patent Glazing Co., of Victoria Street, S.W. The electric lighting was carried out by Clarke & Co., of Sloane Street, S.W., under the instructions of Messrs. Hansard & Watson, the consulting engineers.

Roberts, Adlard & Co. have supplied the slate enclosures to the dressing-boxes.

The engineering work in connection with the baths has been executed by Richard Crittall & Co., of Wardour Street, Oxford Street, W., and has been superintended by Mr. Macdonald on behalf of the Corporation.

Steam is generated by two dish-ended high-pressure Lancashire boilers, each 7 ft. 3 in. diameter by 25 ft. long, at a working pressure of 120 lb. per square inch. A steam main, 6 in. diameter, distributes the steam to the various fittings.

The swimming ponds are filled by a centrifugal pump direct, coupled to a high-speed single-acting engine. When drawing from the storage tank the pump is capable of filling the largest pond, containing 110,000 gallons, in forty-five minutes. Each pond is heated by four ejector heaters.

The water for the slipper baths is heated by two brass-tube calorifiers, specially designed to utilise the exhaust steam from the engines, and is distributed through the building by a pumped circuit system.

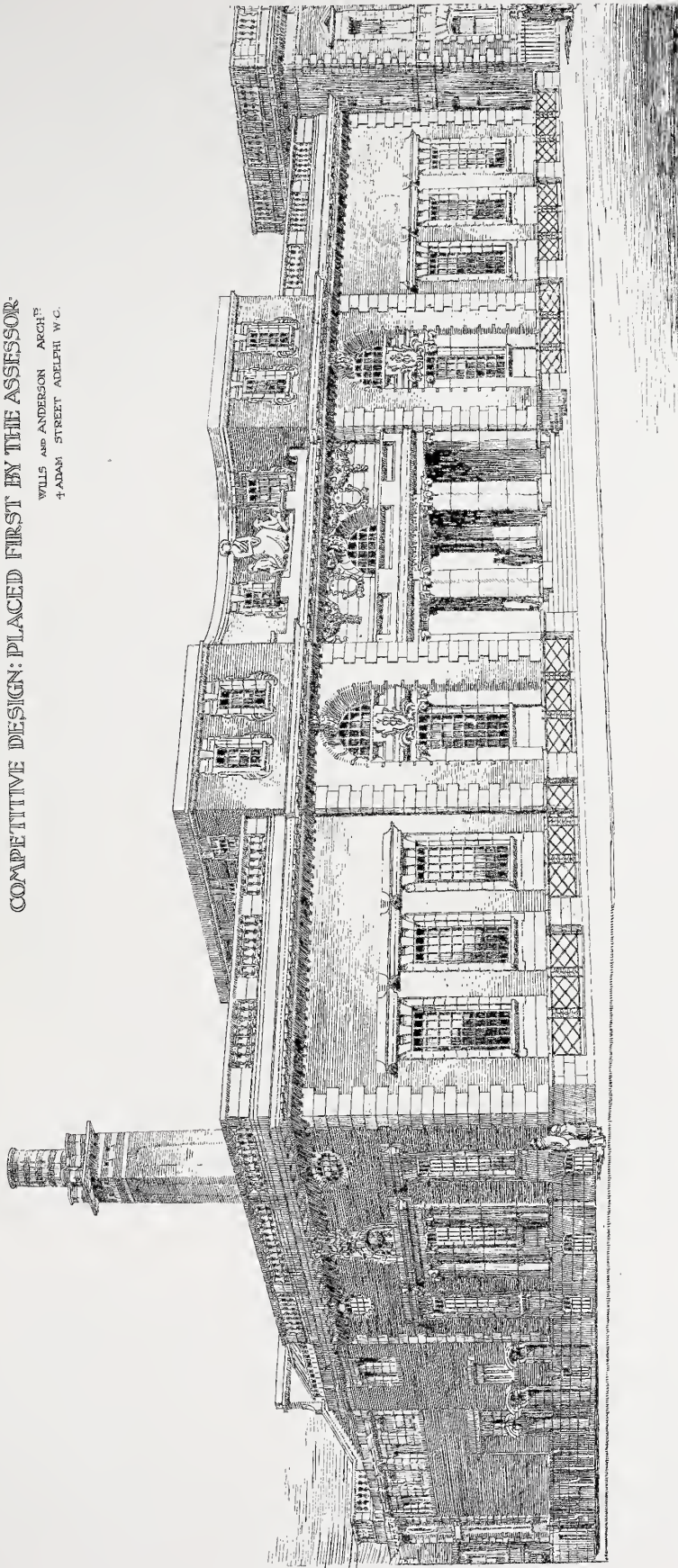
The slipper baths are supplied with cold water in a similar manner. The circulating pumps draw direct from the storage tank and deliver the water through the circulating mains throughout the building, the surplus water being returned to the tank through a spring surplus valve.

The corridors and staircases are warmed in cold weather by radiators, also heated by the exhaust steam from the engines. A by-pass is provided

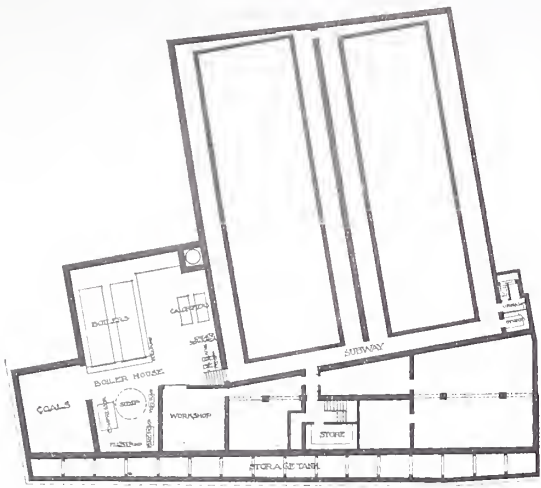
PUBLIC BATHS CHELSEA:

COMPETITIVE DESIGN: PLACED FIRST BY THE ASSESSOR.

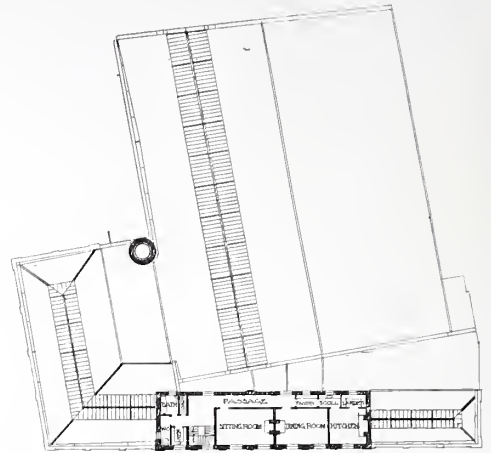
WILLS AND ANDERSON ARCHTS  
4 ADAM STREET ADELPHI W.C.







BASEMENT PLAN



### SECOND FLOOR PLAN



### THIRD FLOOR PLAN

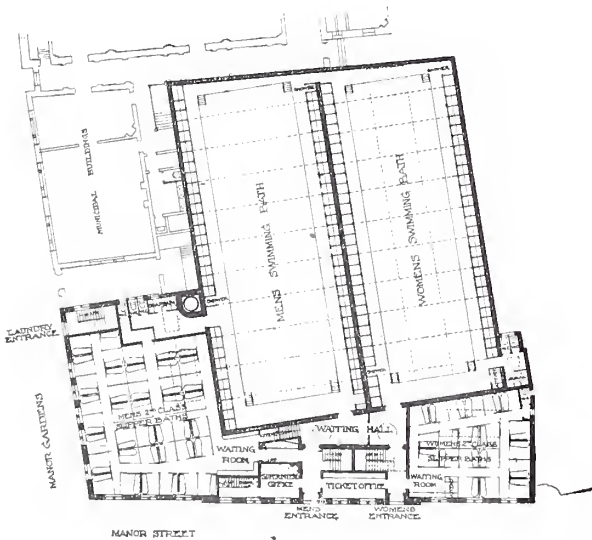
to admit live steam to the heating system if desired.

A very complete system of fire-extinguishing appliances has been fixed. The laundry apparatus is driven by a horizontal steam engine, the power being transmitted by steel shafting running in roller bearings. A drying closet with sliding horses has been provided, the drying medium in this case being hot air driven into the chamber by means of a fan.

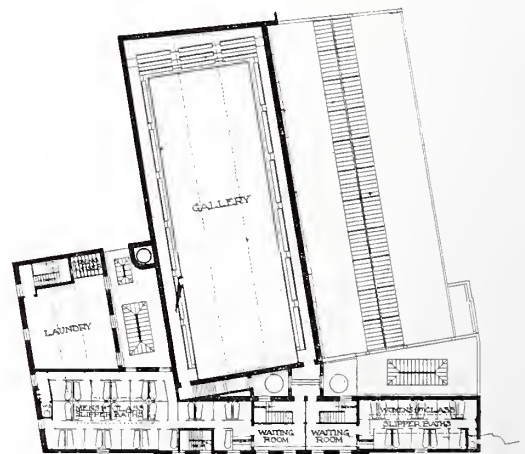
The whole of the condensed steam from the various appliances is returned to a large hot well which has been sunk under the boiler-house floor, from whence it is returned to the boiler by means of the feed pumps or the auxiliary feeding system of injectors.

A plentiful supply of water is obtained from a well which has been sunk by Messrs. Potter, of Lant Street, Borough. A boring about 14 in. diameter has been taken down 470 ft., and 12,000 gallons of water can be raised from this well with the air-lift system. The water is of excellent quality, having about a quarter the hardness of ordinary London water.

The air compressor, which is of the cross compound steam and air type, has been fixed alongside the well with steel receiver, and the delivery is taken direct to the storage tank, but by means of a branch the water can be delivered direct from the well to the swimming ponds if desired. A supply of water is also laid on from the street, through a meter to the storage tank.



GROUND FLOOR PLAN



FIRST FLOOR PLAN

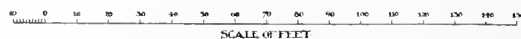






Photo : Arch. Review Photo. Bureau.

GENERAL VIEW FROM THE CORNER OF KING'S ROAD.





INTERIOR OF REINFORCED CONCRETE STORAGE TANK.

## CHELSEA PUBLIC BATHS.

WILLS & ANDERSON, Architects.

HOWARD CASTLE, Quantity Surveyor.

JOHN BENT, Clerk of the Works.

A. N. COLES, General Contractor.

JOHN BUNNEY, Works Manager

### SOME OF THE SPECIAL CONTRACTORS.

THE NEW EXPANDED METAL CO.—Storage Tank and Bath-  
ponds.

A. C. POTTER & Co.—Well-sinking.

R. CRITTALL & Co.—Engineering Work

THE STANDARD PATENT GLAZING CO.—Glazing Roofs and  
Skylights.

POWERS & DEANE RANSOMES, LTD.—Constructional Steelwork.

T. CLARKE & Co.—Electric Lighting.

ROBERTS, ADLARD & Co.—Slate Enclosures.





Photo : Arch. Review Photo. Einteau.

INTERIOR OF MEN'S SWIMMING BATH.

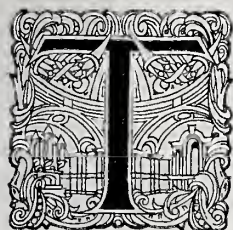


*Photo : Arch. Review Photo. Bureau.*



# The United University Club, London.

Reginald Blomfield, A.R.A., Architect.



THE United University Club, Pall Mall, S.W., has been rebuilt on the old site and upon the same area as the old club-house. As the club accommodation had to be greatly increased, and bedrooms for members provided, the plan

had to be carefully considered in order to comply with the conditions of the problem. The old club-house followed the usual practice of devoting the centre third of the building to a grand staircase, which took up a great deal of room and wasted more by separating the club into two halves. Such a plan was out of the question in the new building, and in order to provide the requisite accommodation it was necessary to place the hall and main staircase at the north end of

the building facing west down Suffolk Place. This arrangement has the further advantage of opening up the entrance from the Haymarket along Suffolk Place.

The club-house contains, in the basement, kitchen and all offices and cellars; on the ground floor, smoking-room (west), reading-room (south), entrance-hall, main and back stairs, and lavatories; on the first floor are the club dining-rooms, *en suite* and occupying the whole of the fronts to Suffolk Street and Pall Mall, coffee-room, main and back stairs, lavatories, &c.; on the second floor, library, smoking library, billiard-room, card-room, secondary main stairs and back stairs, lavatories, &c.; on the third floor, billiard-room, card-room, three members' bedrooms, bath-rooms, lavatories, &c., and secondary main and back stairs; on the fourth floor, seven members' bed-



CHIMNEYPIECE IN DINING-ROOM.

Photo: Arch. Review Photo. Bureau.



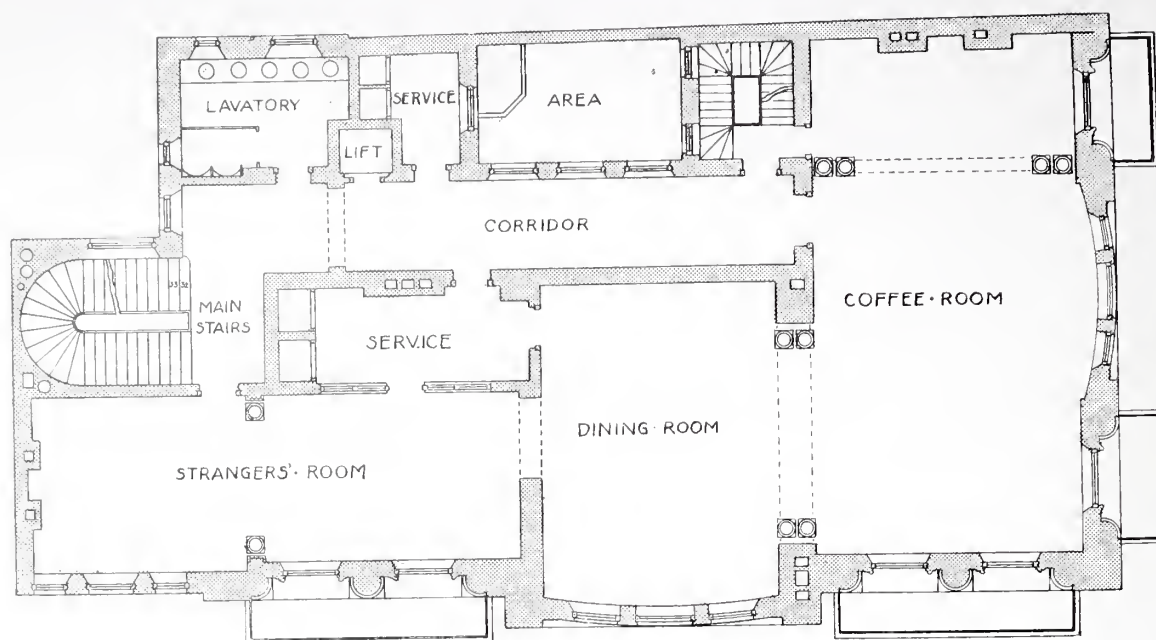
*Photo: Arch. Review Photo. Bureau.*





*Photo: Arch. Review Photo, Bureau.*



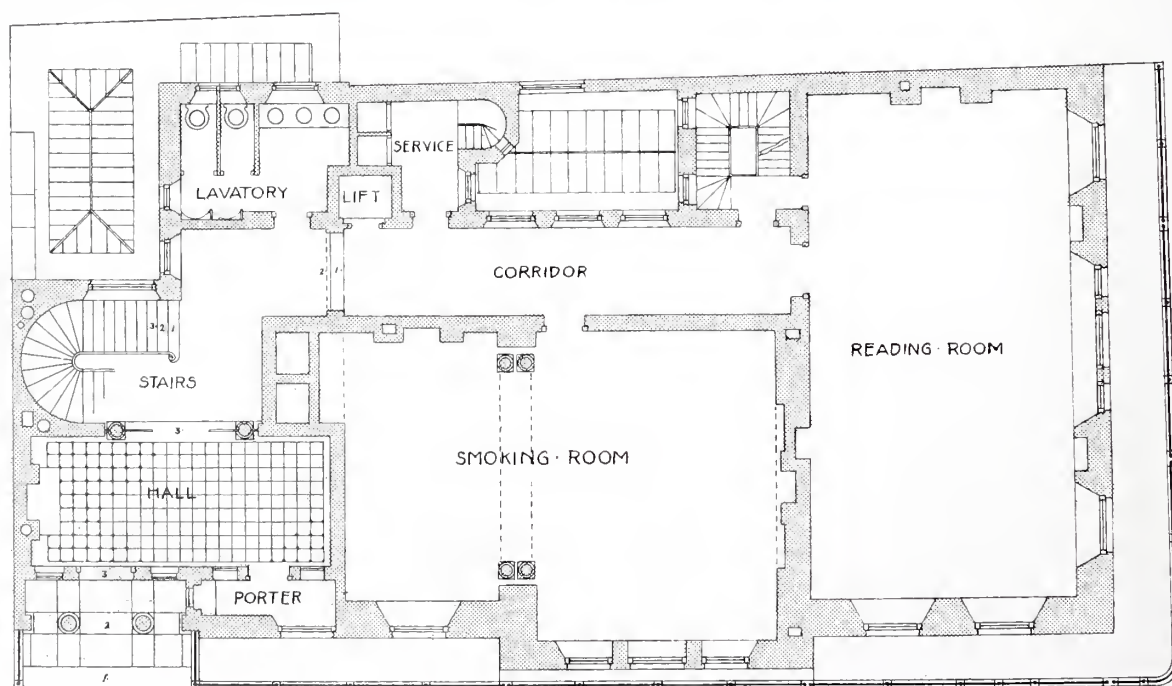


FIRST FLOOR PLAN

rooms, steward's room, and boy's bedroom, bath-room, etc., and secondary main and back stairs. A passenger lift runs up to third floor; a double-service lift from basement to fourth floor, with service-rooms on every floor, and double-service lifts from basement to dining-rooms on first floor.

The façades are faced with Portland stone, and the roof is covered with Westmorland slates. The building throughout is of fire-resisting construction. Messrs. Holloway Bros. were the general contractors. The enriched plaster-work throughout and all internal carving except billiard-room mantel were by Messrs. Geo. Jackson & Sons. The cooking installation by Messrs. James

Slater & Co. The lifts by Messrs. Waygood. The electric lighting by Mr. A. W. Sclater, of Oxford Street, who also carried out the telephone system, electric bells, and speaking tubes. All internal plumbing, hot-water, and heating by Messrs. Matthew Hall & Co.; the wrought iron-work by Messrs. Elsley; and the whole of the external carving was executed by Messrs. Aumonier & Son, the figures in the frieze in Suffolk Street from models by Mr. Henry Pegram, A.R.A. The marble work was executed by J. Whitehead & Sons, Ltd. The whole of the work has been carried out from the designs and under the superintendence of the architect. Mr. A. B. Downs was clerk of the works.



GROUND FLOOR PLAN

SCALE OF 10 0 10 20 30 40 50 FEET





*Photo : Arch. Review Pho'o. Bureau.*





*Photo: Arch. Review Photo. Bureau.*





*Photo: Arch. Review Photo, Bureau.*

INNER HALL AND STAIRCASE,





1 DINING-ROOM, FIRST FLOOR.





*Photo: Arch. Review Photo. Bureau.*

COFFEE-ROOM, FIRST FLOOR.

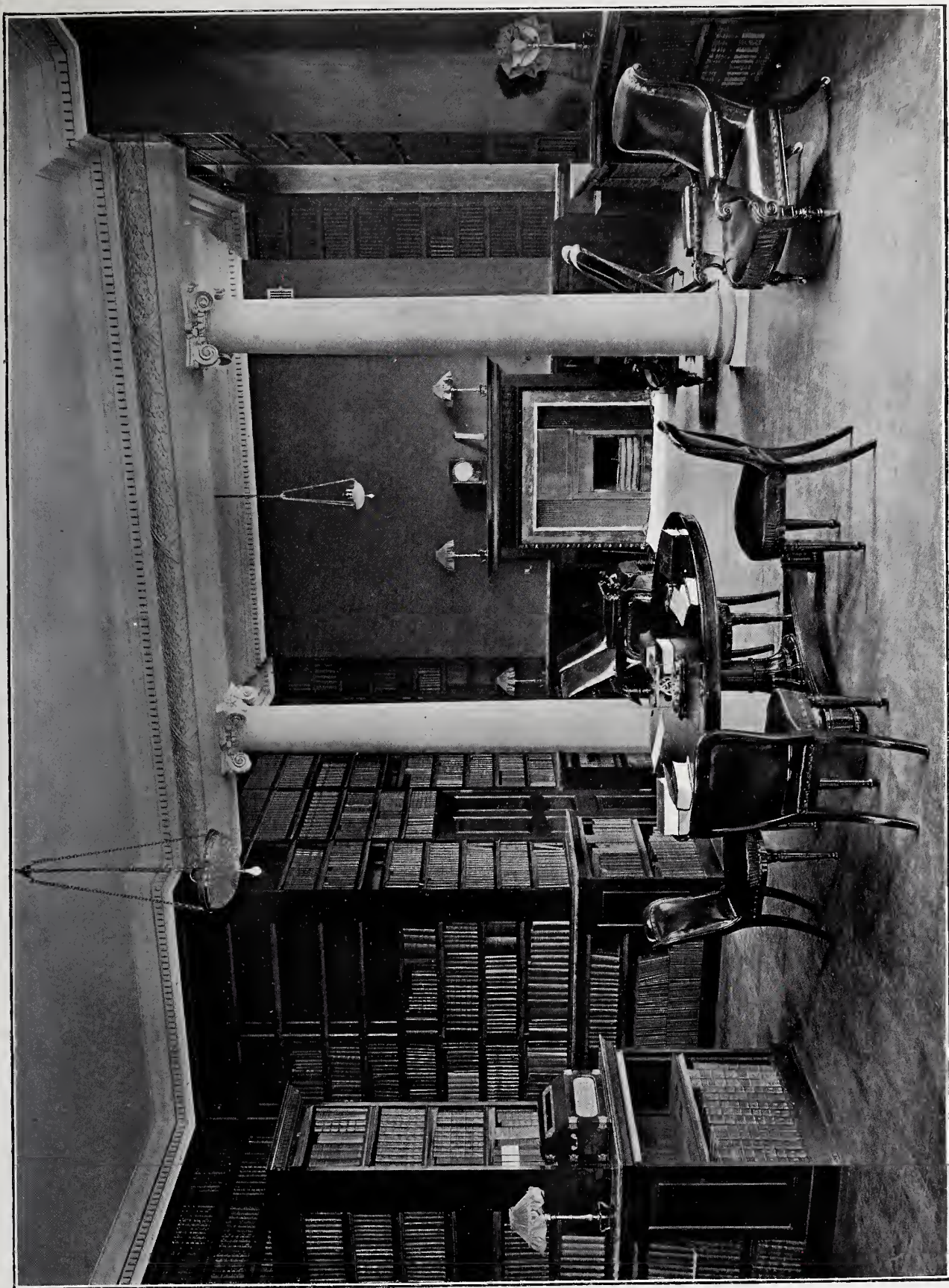




READING-ROOM, GROUND FLOOR.

Photo. Arch. Review Photo. Bureau "J"





*Photo: Arch. Review Photo. Bureau.*

THE LIBRARY, SECOND FLOOR.





SMOKING-ROOM, GROUND FLOOR,

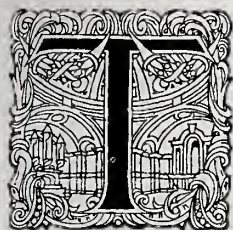
Photo: Arch. Review Photo, Euron.



# Here and There.

## *A Will-o'-the-Wisp in Statue Land—The Treatment of Concrete Surfaces.*

### A WILL-O'-THE-WISP IN STATUE-LAND.



HERE was most assuredly something unusual in the air; quiet squares and blatant thoroughfares of the Great City were, one and all, disturbed, whilst rumours ran round every corner.

It was, indeed, something—in fact, it was nothing less than a call for “General Post,” in a turn of the

time-honoured game of “Post,” among the Statues! The fiat had gone forth, it was mooted, from “Storey’s Gate.”

Signs of some such portentous event had certainly not been wanting, and alarm had spread around the fixtures in stone and metal scattered promiscuously all over the metropolis. Sleepers upon their pedestals, one foggy morning, were aroused by the news that a beautiful little figure in bronze had been discovered in the cellars of the Admiralty, and that official wiseacres at the “Gate” had washed him and rubbed him down, and had declared him to be none other than King James II.!

And they put him up—naked and defenceless Roman soldier that he was—in what still remained of the Royal Gardens in Whitehall. Poor Monarch! scant courtesy did he receive from passers-by; and it was soon understood that that was no place for the last of the Stuarts, so they moved him.

Oh! how Charles I., at Charing Cross, screwed up his lips at the indignities done to his successor! He, saintly King, had experienced nothing but misery and shame in that same Whitehall, albeit that, year by year, amiable Legitimists had adorned his pedestal with floral wreaths and glowing mottoes.

And they dumped down poor James by The Mall, as near as they conveniently could to his erstwhile hiding-place in the Admiralty crypt. Thus, thought they, honour shall be done to his line at last, and carping critics shall for ever hold their peace.

But revolutions were ever wont to be levelled at monarchs; and thus it came about that the *deus ex machina* of “The Gate” one day sent two pleasant-looking young workmen to encamp by the Statue in Cockspur Street.

Nobody had ever quite known who the radiant mounted gentleman was who, since 1836, has, hat in hand, so gallantly saluted all comers from Clubland way. Some said: “Oh, you may depend upon it, he is one of the Georges”; but our American cousins—ever on the side of intelligence—had an entirely different idea. “Why, certainly,” they said, “this is a real noble notion in the old country, to have *our* George right up there on his prancing Philadelphia charger!”

And “George Washington” he was to them, and to many more—you see the two Georges were as alike in physiognomy as two peas. But their prescience was all wrong, for, when those easy chisels had rested from their labours, behold, on the pedestal appeared the legend: “George III.”—and so it was!

Then there came the wholesale destruction of “The Mall,” and an official programme of sculptural adornments to be. Even Cleopatra’s Needle felt insecure, and Boadicea whipped up her horses, ready to move on, whilst all the more modern Royalties began to prepare for a general fitting. Everything and everybody seemed to be in dire confusion, but it was Queen Elizabeth, by St. Dunstan’s in Fleet Street, who quite

unexpectedly set all misgivings at rest. It was, perhaps, something of a shock to discover that the great Queen was actually in London town, so few knew her latest domicile.

“You see,” said she, “we are such an incongruous lot, and so entirely unlike our real selves, that, in spite of the fact that the powers that be have no sense of congruity or proportion, they’ll never move us, as we are, into that great, vulgar, dusty, howling thoroughfare.”

And all the other Royalties gave heed, from Richard Cœur-de-Lion at Westminster to Victoria the Good at Blackfriars. They felt that Bess was right, for they reflected that not any of them had so completely made circumstances bend to their will as she had done. At the same time they greatly wondered why “Kismet” had degraded the Virgin Queen to serve merely as an over-door for the scoffs and jeers of ribald school-children.

Both Kings and Queens betook themselves once more to their accustomed poses, and ceased their gossip—although good Queen Anne, with regard to her propinquity to the great Cathedral, elaborately washed her face and her clothes—to carry out the maxim, “Cleanliness is next to Godliness.”

The Royal example, alas! could not be followed by other groups in stone and metal. From east and west, and north and south, came nervous whisperings. Sarah Siddons, sitting on Paddington Green, turned white and whiter; whilst Thomas Carlyle, reposing on Chelsea Embankment, turned black and blacker, and so on.

In none of the squares was there anything like so much chitter-chatter as in Parliament Square and Old Palace Yard. This was quite what might have been expected, for statesmen are nothing if they are not talkative.

It was George Canning who was soliloquising under his arboreal canopy, with his gaze fixed upon his fellow-statues: “This square,” he was saying, “is reserved for Prime-Ministers of the reign of Queen Victoria—so I hear—but, whilst I feel a little previous, to be sure, I claim as the first denizen of a billet here. It is said some of us have to move. I suppose they mean me. Well, really, ever since those four dapper little men hopped upon their pedestals, in front of me, I have felt the disproportion of my bulk and blackness immensely.”

As he spoke, Derby pulled his peer’s robe more tightly about him, Dizzy—next lot—shrugged his imperial shoulders, and tossed the love-lock on his brow, whilst Palmerston went on chewing his corn-stalk in perfect indifference. As for Peel, why, he assumed that very stolid pose which is the ambition of every law-abiding “bobby,” with a bronzy gaze all along Whitehall. And four melodious voices were blended in the refrain: “Here we are, and here we mean to stay, and,” with scornful reference to poor old George at their back, “may the devil take the hindmost!” Canning felt the insult sorely, but unselfishly enough he set to work to elaborate the “idea” of a Victorian-Premier Place.

“I have no claim to be ranked a Victorian,” he uttered, rather sadly; “that golden era began in the thirties, whilst my Premiership was in the twenties. No, I see I must go and make way for one of the moderns; and, actually, the arithmetical sum of such men is in the exact ratio of the number of ‘sites.’ Statues of Melbourne, Russell, Aberdeen, and Salisbury—the last of the Grand Premiers—will doubtless occupy the four vacant places, and completely ‘square the compass’; whilst Gladstone, or ‘The People’s William,’ will



be quite at home in my woodland, only he and his must never again attempt to cut trees or the 'Union' down!"

"But for myself," Canning went on, "what must I do?" And he was nothing if he was not many-sided, and just because he carried out in 1821 his policy of non-interference in the Turco-Greek struggle, and ranged himself alongside France and Russia in the interests of peace, so now he would reverse that policy so far as interfering with others was concerned, and he doubted not that the result would be quite the same.

"Happily," he reflected, "I am not quite alone in the matter of incongruously bestowed Premiers. I'll just 'wireless' Fox and Pitt, who are perhaps rather out of it."

"Hallo! Are you there? I'm Canning."

"What's the matter?"

"Why, there's going to be a 'General Post' among the statues, and I fancy you and I, and Pitt too, will have to move; but, I say, are you comfortable away there in Bloomsbury?"

"You unnerve me, Canning boy. Between you and me I am abjectly miserable here, with nothing but cheap boarding-houses all around. I was never in such a place in my life, and can't think why I was stuck up here."

"Well, then, my idea, Charles James, is for you and Pitt and me to make common cause and obtain a common pitch in a favourable locality I wot of. Just you get at William, he's near you, I think."

"Are you there, Pitt? I'm Fox—Fox of Bloomsbury. Canning, down Westminster way, says there is a project on foot to move some of us, and he thinks we three had better form an association for mutual protection, or a union for neighbourly elevation. What say you?"

"Well, I'm not so sure that I want to move now; originally I did feel keenly the ridiculousness of this locality. But you don't know Hanover Square as it is—by the way, there was never any notion of my 'going to Hanover'—it is a peculiarly agreeable pitch, don't you know?"

"Oh, I'm pretty sure Canning wouldn't wish you to be put to any inconvenience, he only——"

"You see, I have, day in day out, nothing before me but blushing brides leading unresisting bridegrooms into the House of Bondage—I should say, St. George's Church. What would you have more than youth and beauty adorned in Lucille's emotional frocks and Gainsborough's hats? There is something very appealing in all this to a sensitive fellow like me. Perchance I look severe enough in my grime, with a profile exactly like my two successors as Imperial statesmen—Beaconsfield and Chamberlain—though I am rather doubtful whether I ought to name the latter, seeing he is not yet quite one of us, but I have a very tender heart all the time. You see, if I move I must give up all these pleasant things. But, really, if my country demands further sacrifices, my spirit is for ever Imperial, and I shall, of course, fall into line with all the other sons of the Empire. Anyhow, I'll have a chat with Canning."

The end of those cogitations was that the three "great" Statues ranged themselves side by side in Old Palace Yard, where Pitt had the satisfaction of gazing right into Westminster Hall, pondering when the time would come that its doors would be thrown open for the sessions of an Imperial Senate representative of every State in the Empire of Britain.

Even so there was no peace yet in those historic precincts, for was there not just round the corner the grim figure of the Protector?

"Might as well put up Satan beside the Abbey," slyly sneered Fox.

Oliver, ever on the alert, caught something of this satire, and he scowled still more scowfully, whilst the mephitic lion at his feet got a good kick.

"I don't mean to say that I'm in the least ashamed of being here, although it was rather a joke on the part of little Primrose to fix me in this—the least likely of places." (As he spoke the Mace turned upon its trunnions and appealed to the Speaker, "Order! Order!") "But if they move me, by Providence, I cannot, for the life of me, guess what will happen to the modern 'Rump'—I mean the querulous men of no party or any party—in the Commons of to-day. I've heard their prancings and their tumults, I have that! Nothing of that sort would I have tolerated for a moment. It will take a lot to move me; when I put my foot down I keep it down—there!"

In Trafalgar Square, in spite of its big lions and its cooling fountains, there was a sustained tremor of apprehension. Nelson looked down, as best he could in his big cocked hat and mortally stiff choker, and tried to grapple with the ebullition. He was himself at all events perfectly safe, although elevated more than most men; but he felt that forces were at work which probably would very considerably alter the details of his environment.

To tell the truth the grand old salt had never quite understood the presence of Napier, Havelock, and Gordon upon his quarter-deck; and, honest hero that he was, he was quite ready to believe that those redoubtable generals experienced grave searchings of heart for their intrusion upon a strictly Naval base.

Could he have seen the three figures he would have noted how that Gordon, most modest of Commanders, most estimable of Martyrs, stood bare-headed, with folded arms, sadly contemplating the ground on his pedestal, as much as to say: "They've made a second grand mistake about me. I've really nothing whatever to do with Trafalgar or Nelson. Must I again look in vain for relief?"

Havelock and Napier, on the other hand, Nelson would have noted, appeared to have made up their minds to brazen out the sorry business. Especially was this the case with the latter with his hooked nose. Together they set their gaze fixedly down Whitehall, despite the disrespectful remarks of loiterers in the Square. Probably they were anxiously watching for the merciful ambulance from Storey's Gate, which would convey them to a much more suitable locality hard by, where military prowess would be recognized in congeniality of comradeship.

And Nelson pondered matters over, regardless alike of the roar—not of his lions, but of the 'buses; and of the spitting—not indeed of bomb-shells, but of the water squirts. Then there arose behind him a vision of beauty and fitness.

The ambulance had arrived from Storey's Gate, and busy mortals were reverently up-tilting the brave Generals, and great shears were hoisting the stirrupless King.

It was George IV who was making way for further improvements; and yet His Majesty had a distinct claim to be represented in the Square, for was it not due to his Royal bounty—fed largely perchance by alien gold—that the Square was ever formed, and had he not a perpetual lien upon the whole freehold?

But the Royal statue had not far to go, and the "First Gentleman in Europe"—not to quote the other aliases—was to be set up between a Royal Portrait Gallery and a Royal Church; truly a fitting station for a king.

As Nelson took in quietly these arrangements he mused aloud: "I never could understand why a *second* Gordon monument was ever stuck up there. They tell me he was on a camel—a camel!—of all creation, the least congruous of beasts. It must have been an extraordinary sight, but thank God it was spirited away. I do believe the whole thing was a piece of bluff on the part of Storey's Gate.

And Nelson dreamed again, but what he saw in his dream surely could not be matters of fact; so he fixed his one eye,



and then he knew that all things were possible at "The Gate." The Square was actually being transformed! A great flight of steps cut through the terrace balustrade led immediately up to the National Gallery, which, like his own fully-rigged "Victory," shielded him in battle and in breeze. Four noble allegorical groups in bronze appeared upon the terrace instead of two plain pedestals. These told the glorious stories of the Armada, and other three great epochs of Britannia's Rule. In place of bare walls, around the Square, were standing out fine bas-reliefs, after the fashion of his own, representing glorious deeds of doughty old sea dogs.

A proud smile suffused the features of the grand old admiral when he witnessed the erection of a range of naval masts in stone, bearing bronze models of celebrated battleships, and burnished medallions of famous sea fights.

"What will they place," he queried, "where Gordon, Napier, and Havelock once stood, I wonder?" and he tried to push his glass into position.

"Ah!" he said, "I see; and though I'm not quite up to Tubes and Drinking-fountains, still there may be something in it; anyhow, the graceful little Temple each side of me will have a utilitarian as well as an ornamental purpose, and really I am quite as willing to take a trip on the 'Bakerloo' as to drink the healths of all brave men, whether friends or foes."

Lady Hamilton had doubtless taught the gallant veteran not a little art as well as a little artfulness, so approvingly Nelson witnessed the contraction of the fountain-basins, and the introduction of greenery, artistically cut evergreens in neat wooden boxes, and of vases filled with many-hued flowers.

Whilst Lord Nelson, upon his column, was so busily engaged signalling up and down, it could not fail but that the other columnated hero—the gallant Duke of York—should be affected. No commander had ever achieved quite such fame as he in the "marching up and down of men," and consequently he had his own Royal ideas upon the subject of "General Post."

Like the Hero of Trafalgar the Duke had his back to his men; but, nothing daunted, he hailed his mates: "How are you getting on, my lads? There's change in the air, I hear; but I think we're all right, anyhow, except in the case of poor Franklin. He always appeared to be a sort of odd gosling among us, didn't he? It would be far better for him to start on a new expedition, to the Victoria Embankment—nearer, you know, that element which was distinctly his—water, whether Thames mud or Arctic ice. Besides, they tell me Outram of ours has been stuck up there—such a stupid mistake—by all means bring him up to Franklin's billet."

"But," continued the Duke, "Nelson says Storey's Gate men are in his Square, and they are moving Gordon, Havelock, and Napier."

"Who said 'Napier'?" cried out he of Magdala fame, astride his horse in York Place; and he turned in his saddle. "What are they up to with our Charles? Confound them!"

"Make your mind easy, my lord," suavely replied His Royal Highness; "I know what they are up to. Why, of course—the very place for all heroes of the army—they're putting them to face the Horse Guards: a splendid pitch, with the effective background of the Park. But, I say, we must have Strathnairn here too, from Knightsbridge—both these new titles—a 'Rose' would smell as sweetly if known by any other name, 'tis true"—an unexpected sally of wit on the old Duke's part, but he was in merry mood.

"I say, you fellows," he went on to say, "there is a probability of 'George Ranger' coming this way. What do you think of that? Sly old dog, to be sure. Yes, I shall be proud to see my worthy nephew once more, especially as he so entirely carried out my ideas with respect to the command of the army."

And so it came about that the Horse Guards Parade became the post for military statues—a very common-sense arrangement, as you and I may say.

The Duke of York named the Victorian Embankment, and, as it is not a very far cry, we'll hie us there; perchance we shall refresh our weary eyes with the perfect fitness of things there.

Alas! be it told, but the Embankment is nothing more or less than an open-air Madame Tussaud's where "new figures," as runs the advertisements, "are added from time to time of all the celebrities!" And indeed it is a miscellaneous collection of Statues which arrests the eye of the intelligent New Zealanders from London Bridge, and the ejected Home Rulers from Westminster.

"Why," reflected one of the former as he surveyed the "Ruins," "this spot must have been a sort of rubbish heap; there are fancy statues of all sorts and kinds. What I should like to know is what Raikes had got to do with Cleopatra, or Burns with Brunel—save their common initial letters. The men who were responsible for these gardens and boulevards were born idiots. This would have struck any one else as an ideal spot for the memorials of the great civil servants of the Empire of Britain. There along with Bartle Frere—the only figure of the lot appropriately placed—should have been Grey and Parkes and Rhodes, and other Makers of the Empire. Franklin, too, and Speke—both, I hear, at present in incongruous positions—and many more Explorers, with Merchant Princes and Inventors of world communications, and the like. Alas! there was no Storey's Gate in those days, was there?"

But "Ichabod" is writ big on many a statue pedestal, and the cry goes up ever and anon, "Let's away, this is no place for me! no place for me!"

EDGCMUBE STALEY.

\* \* \* \* \*

#### THE TREATMENT OF CONCRETE SURFACES.<sup>1</sup>



PLEASING and consistent surface finish generally has but little to do with the strength of a concrete structure, but it is not inconsistent with maximum strength in any structure.

Next to form or design, the character of the surface has most effect on the appearance of concrete, whether in a building arch, wall, or abutment;

in fact, when the view is had at a very close range, or in such structures as retaining-walls or pavements, the surface finish may take precedence over proportion.

It is not intended to attempt a full discussion of the subject, but only to describe some methods used in trying to obtain satisfactory surfaces in the various classes of concrete work done in the South Park system of Chicago.

The imperfections in the exposed surfaces of concrete are due mainly to a few well-known causes which may be summed up as follows:—

1. Imperfectly made forms.
2. Badly mixed concrete.
3. Carelessly placed concrete.
4. Efflorescence and discoloration of the surface after the forms are removed.

Forms with a perfectly smooth and even surface are difficult and expensive to secure. Made of wood, as they usually are, it is not practical to secure boards of exact thickness, joints cannot be made perfectly close, the omission of a nail here and there allows warping, and the result is an unsightly blemish where least wanted.

<sup>1</sup> A paper by Linn White, Engineer South Park Commissioners, Chicago, Ill.



Badly mixed concrete gives us irregularly coloured, pitted, and honeycombed surfaces, with here a patch of smooth mortar and there a patch of broken stone exposed without sufficient mortar. Careless handling and placing will produce the same defects.

But granting we have the best of labour, that all reasonable expense and care is had in making up forms, in mixing, handling, and placing the concrete, that it is well spaded, grouted, or the forms plastered on the surface, the results are not satisfactory. All these efforts tend to produce a smoothly mortared surface, and the smoother the surface the more glaring become minor defects. The finer lines of closely-made joints in the forms become prominent, the grain of wood itself is reproduced in the mortar surface, hair-cracks are liable to form, and, worst of all, efflorescence and discoloration are pretty sure to appear. We surely have been working on a wrong theory.

It is of doubtful efficiency to line the forms with sheet metal or oilcloth. Imperfections still appear.

Two methods suggest themselves as likely to overcome the defects alluded to above. (1) Treating the surface in some manner after the forms are removed to correct the defects, and (2) using for surface finish a mixture which will not take the imprint of and which will minimize rather than exaggerate every imperfection in the forms and which will not effloresce.

Methods of treating the surface by bush-hammering, tooling and scrubbing with wire brushes and water have been described in various published articles, all of which have for their object the removal of the outer skin of mortar in which the various imperfections exist. But the method most used in the South Park work is the acid treatment. It consists of washing the surface with an acid preparation to remove the cement and expose the particles of stone and sand, then with an alkaline solution to remove all free acid, and finally giving it a thorough cleansing with water. The operation is simple and always effective. It can be done at any time after the forms are removed, immediately or within a month or more. It requires no skilled labour—only judgment as to how far the acid or etching process should be carried. It has been applied with equal success to troweled surfaces, like pavements, to moulded forms, such as steps, balusters, coping, flower-vases, &c., and to concrete placed in forms in the usual way. It, of course, means that in the concrete facing only such material shall be used as will not be affected by acid, such as sand or crushed granite. It excludes limestone.

The treated surface can be made any desirable colour by selection of coloured aggregates or by the addition of mineral pigments. The colours obtained by selection of coloured stone are perhaps the most agreeable and doubtless more durable.

There have been moulded in the South Park shops blocks for buildings, columns, architectural mouldings and ornaments with both red and black crushed granite, all treated with the acid to bring out the natural colours of the stone. There has been a large quantity of concrete pavement laid with torpedo sand surface coloured a buff sandstone colour with a small quantity of yellow ochre and mineral red and treated with acid. The buff colour imparted to the surface is a welcome relief from the glare of the ordinary whitish grey concrete pavement in the sunshine, and the etching of the surface adds to the softness of the colour, at the same time preventing any slipperiness. The same buff colour has been used to a large extent in steps, bases of lamp-posts, and other moulded articles to be placed on or near the ground. With sand as the aggregate thousands of pieces have been moulded for coping, balustrades, concrete seats, drinking fountains, pedestals, &c., which, when

treated with the acid, appear like fine-grained, almost white sandstone.

Where there are projections or marks left by the moulds or forms they are tooled or rubbed down before treatment, and where it is necessary to plaster up rough places or cavities in the surface it may be done after treatment, and cannot be detected.

These various classes of work have been done on a large scale during the last three years in connexion with the improvement of new parks, and have in all cases proved satisfactory.

The second method of preventing or minimizing surface defect has also been tried in the South Park work with quite a measure of success.

During the years 1904, 1905, and 1906 groups of concrete buildings have been erected in nine different parks, costing, with their accessories, from 65,000 dols. to 150,000 dols. for each group. These buildings are all monolithic structures, with occasional expansion-joints, the exposed surfaces of walls being of concrete composed of one part of cement, three parts of fine limestone screenings, and three parts of crushed limestone, known as the one-fourth-inch size. This was thoroughly mixed quite dry, so no mortar would flush to the surface, and well rammed in wooden forms made in the usual manner. The result was an evenly grained, finely-honeycombed surface, of a pleasing soft grey colour, which grows darker with time and blends admirably with the park landscape. In placing it was not spaded next the form; it was too dry to cause any flushing of mortar, so there is no smooth mortar surface, the imprint of joints between the boards is hardly noticed, and the grain of the wood is not seen at all. There is no efflorescence apparent on the surface anywhere, and cannot be on account of the dryness of the mixture and the porosity of the surface. The buildings are used as gymnasiums, assembly halls, reading and refreshment rooms, and as a rule the same grey concrete finish is given the interior walls as the exterior. In some cases a little colour has been applied on the interior walls, and the walls of shower and bath-rooms have been waterproofed with plaster. The porosity of the surface makes it well adapted to receive and hold plaster.

This sort of surface is not capable of treatment with acid as a smoothly mortared surface, nor is it desirable. Consequently the only colour obtainable is the natural colour of the cement-covered stone, but which is softer and far more agreeable than the grey of the usual mortar-finished surface. It is not suited for the surface of a pavement and is not impervious to water. Although it is evident the water enters the pores to a considerable extent, there is no evidence of injury from the frost during the two winters some of the walls have stood.

The same finish has been used for retaining-walls, arch bridges, fence-posts, walls enclosing surface yards, &c. In the buildings the thin walls were made entirely of this mixture, while in the heavier structures it has been used only as a facing. Two reinforced arches of 60 feet span were faced with this mixture, but the steel was imbedded in a wetter, more impervious concrete. This same dry mixture can be used for moulded stones when the mould is open enough to permit tamping, and of course it is eminently suited to block machines.

With the finely crushed stone a sound, smooth surface was obtained (when the sides of the boxes were removed) where it was manifestly impossible to plaster or grout the surface and where spading a mixture of coarser stone simply washed the cement away from the surface stones. On account of the variable water-level it was particularly desired to have a sound, smooth surface.



THE ARCHITECTURAL  
REVIEW, AUGUST,  
1907, VOLUME XXII.  
NO. 129.





*Photo: Bedford Lemere & Co.*

THE NORTH BRITISH AND MERCANTILE INSURANCE HEAD OFFICE, EDINBURGH.

THE TOP OF THE MAIN STAIRCASE.

J. M. DICK PEDDIE, ARCHITECT.



# The British Museum Extensions.

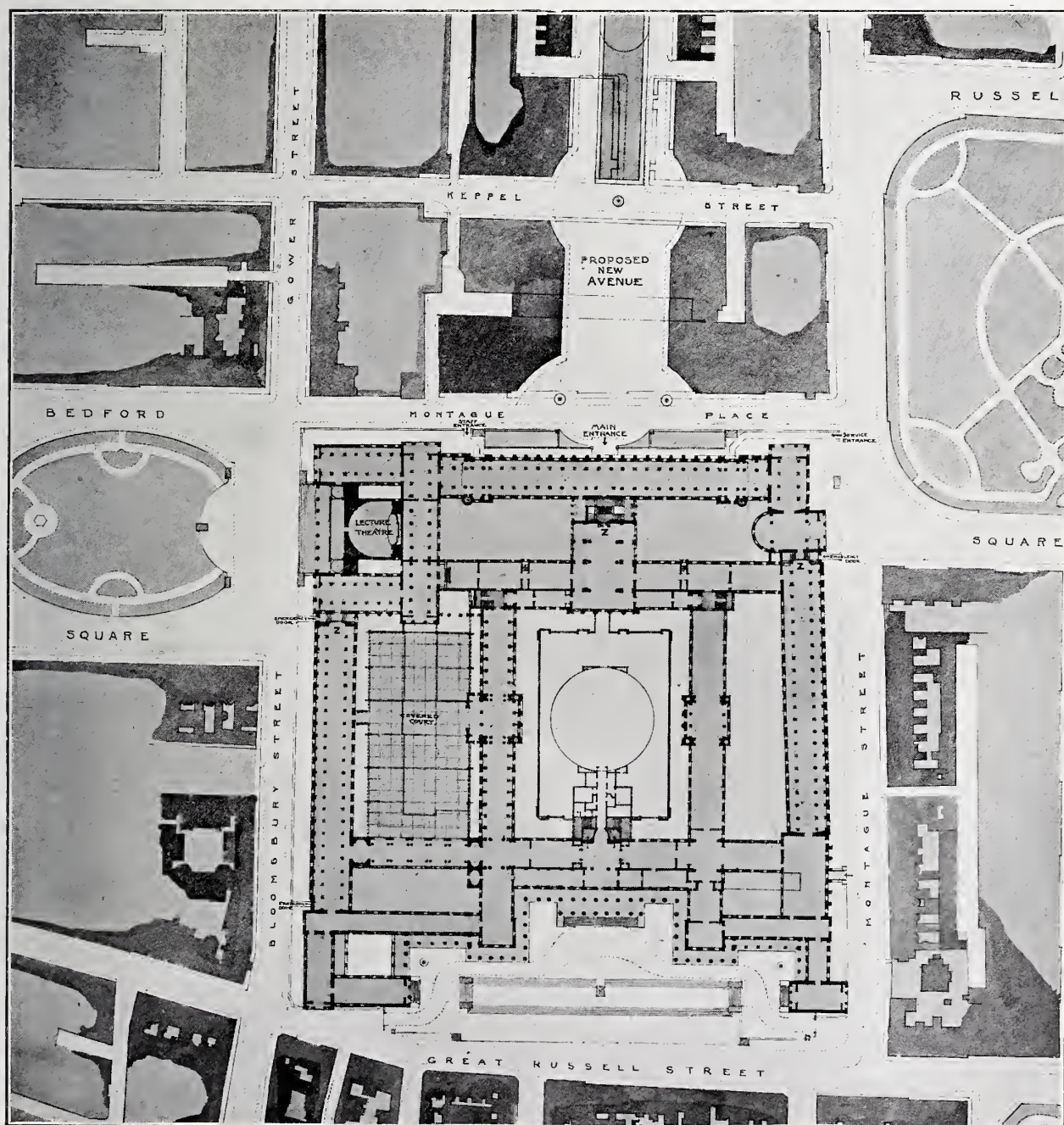
John J. Burnet, A.R.S.A., Architect.



HE foundation-stone of the new buildings which are to form an important extension of the British Museum was laid by His Majesty the King on Thursday, June 27. The accompanying plan shows the scheme. It will be seen that

a long gallery facing Montague Place is to be

added at the back of the present building, and new galleries erected on either side, the one fronting on Bloomsbury Street and the other fronting on Montague Street, for which purpose the houses now occupying the site will be demolished. For the present, however, only the centre portion of the building facing Montague Place is being erected. The pavilions at either end will afterwards be added. The property has been acquired



BRITISH MUSEUM EXTENSION. BLOCK PLAN.





THE TROWEL.

on the western side of Montague Street, the southern side of Montague Place, and the eastern side of Bedford Square and Bloomsbury Street, in all amounting to an area of  $5\frac{1}{2}$  acres, which, added to the existing site of the Museum, makes a four-square area of 12 acres. The cost of the site has amounted to £200,000, £5,000 of which has been provided by the bequest of Mr. Vincent Stuckey Lean, and the remainder provided by the Government. The erection of the extension coming within the province of H.M. Office of Works, the Earl of Plymouth (then Lord of Windsor and



THE LEVEL.

First Commissioner) entrusted the preparation of the designs to Mr. John James Burnet, A.R.S.A., of Glasgow. The building facing Montague Place, now being erected, is to comprise basement and sub-ground floors (already constructed), providing ample storage space, chiefly for the continual additions to the library; a ground floor which will consist of a range of galleries, also to be appropriated to the uses of the library; above this a mezzanine floor, to provide studies and students' rooms; and an upper floor, to be devoted to a range of galleries 380 ft. in length for the exhibition of the Egyptian or other collections. The façade, in keeping with the present building, is Ionic in character. A simple row of engaged columns, flanked by massive pylons, will occupy its full length. The centre portion and a detail are published in following pages, from which it



THE MALLET.

will be admitted that the architect has produced a very interesting design. This building is the first of the series to be erected, and Mr. Burnet's scheme embraces the alteration of existing thoroughfares so as to secure fine approaches to the Museum. The contractors are Messrs. Charles Wall, Ltd., of Chelsea.

The instruments provided for His Majesty's use in laying the stone were specially executed by the Bromsgrove Guild, and are interesting in their symbolism. The handle of the silver trowel is a

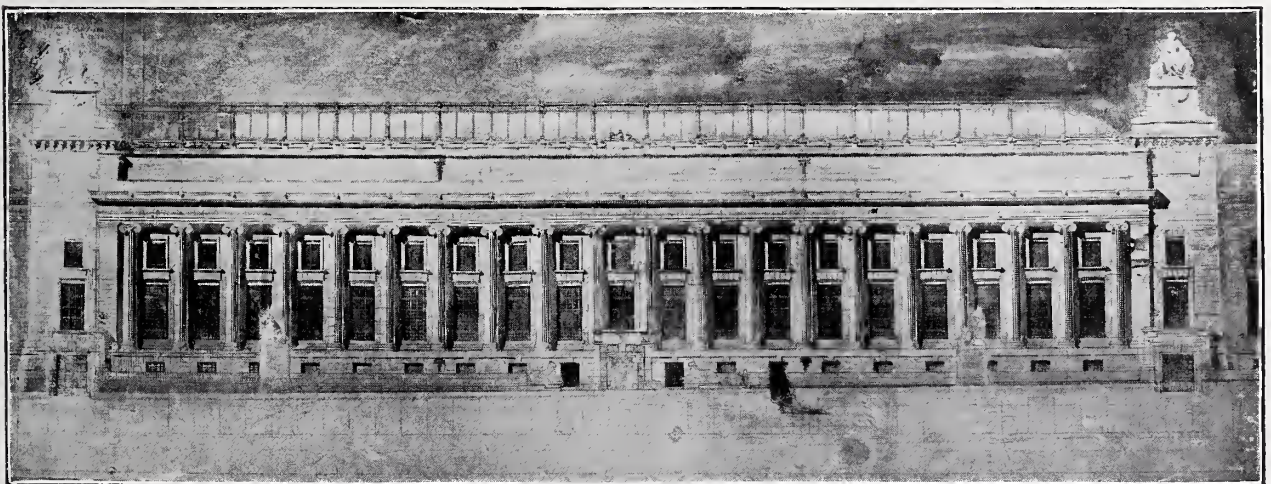




MODEL OF MAIN ENTRANCE AND PART OF COLONNADE ON THE NORTH OR MONTAGUE PLACE FAÇADE. FINAL DESIGN.

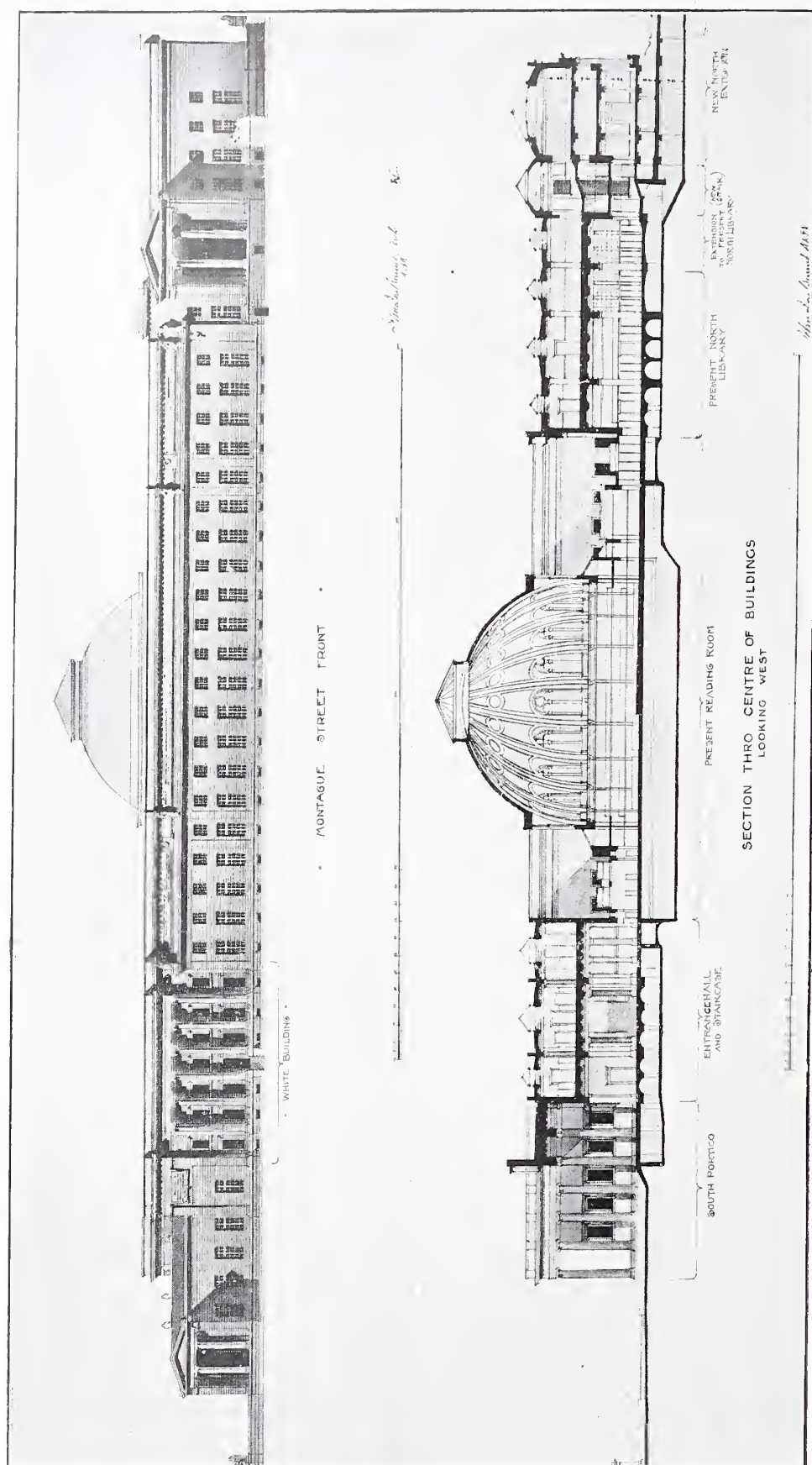
female figure representing Modern Art, rising from a pedestal suggestive of the art of the past, and holding aloft a child, the art of the future. The handle of the mallet, of ebony and silver, shows a figure of "Art, crowned by Love," symbolical of

her power to raise labour to the highest use. A figure of Truth standing in the centre of the ruler of ebony, and holding a plummet which swings on an engraved quadrant, forms the level. Each instrument is thoroughly practical.



FINAL DESIGN FOR NORTH OR MONTAGUE PLACE FAÇADE.

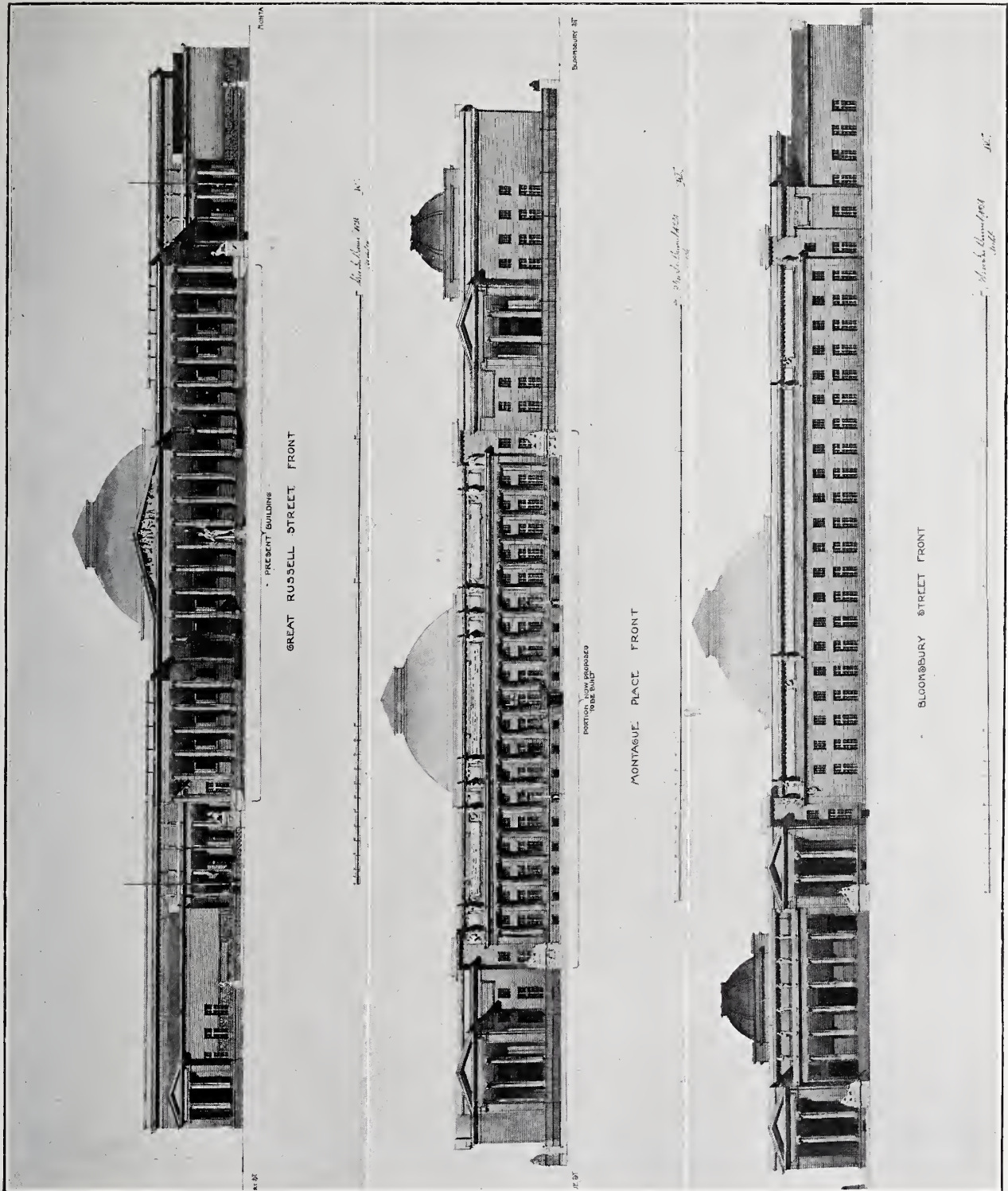
THIS PORTION OF THE NEW BUILDINGS IS IN COURSE OF ERECTION.



THE MONTAGUE STREET OR EAST FRONT.

SECTION THROUGH CENTRE OF THE BUILDINGS.



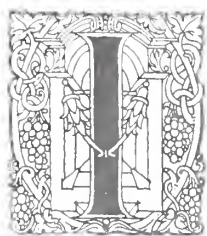


THE SOUTH OR PRINCIPAL FAÇADE.  
THE NORTH OR MONTAGUE PLACE FAÇADE (SINCE REMODELLED).  
THE WEST OR BLOOMSBURY STREET FAÇADE.

# The Church of St. Titus at Gortyna in Crete.

In Candy also is the olde church whereof Tytus was bysshop, to whom Poule wrote epystelles, etc. I sawe the grave of the sayd Tytus.—*The Pylgrymage of Sir Richard Gylforde*

## SOURCES OF INFORMATION.



It is somewhat strange that Crete, which belongs geographically to Greece and Asia Minor, should contain so little that can really be called Byzantine in its architectural remains.

The connection of the island with Cyrene in Roman times may have thrown it, architecturally, into a back-water, for its Byzantine work, with probably but one exception, is small and unimportant in character, belonging at the best to the times of the Palæologi,<sup>1</sup> when the Empire was at its last stand.

The church of St. Titus at Gortyna is, however, an exception, and appears to be unique in Crete. Its importance has been recognised for some years by Dr. Arthur Evans, who has gone so far as to maintain that it is a work of the fourth century A.D. Subsequently, Professor Lethaby discerned that the church might be of great interest, and urged me to complete a rough plan I had made on a hurried first visit.<sup>2</sup>

The building has for long been associated with St. Titus. An important reference to it occurs in the chronicle of Sir Richard Gylforde's journey to the Holy Land in 1506.<sup>3</sup> There can be little doubt that the church at Gortyna is meant; though there was a later (Venetian) cathedral of St. Titus in the "cytie of Candy," it would not be referred to as "The olde church" at the time when this chronicle was penned. Onorio Belli, the Venetian, whose MS. of 1586 describing Cretan antiquities exists,<sup>4</sup> also described the church and prepared a plan of it, now unfortunately lost. His description of the church is important:—"This was the church of the martyrdom of St. Titus. It was built entirely of squared stone from ancient buildings, without brick. Its construction is remarkably solid, and

its walls are perfect, but the roof has fallen. The building was plain, without ornaments or columns. The cupola was supported by four pilasters, giving the plan the form of a cross. All decorations, if it had any, are now destroyed."<sup>5</sup>

In the account of Pitton de Tournefort,<sup>6</sup> written at the beginning of the eighteenth century, we detect the modern spirit of inquiry, but the thumb-nail sketch given by him shows that the building was almost as incomplete then as now. Pococke,<sup>7</sup> who wrote shortly after Tournefort, gives a more detailed account of the construction. He says also, "It is with great reason supposed that Titus resided here, and that this church was afterwards dedicated to him." Pashley,<sup>8</sup> who

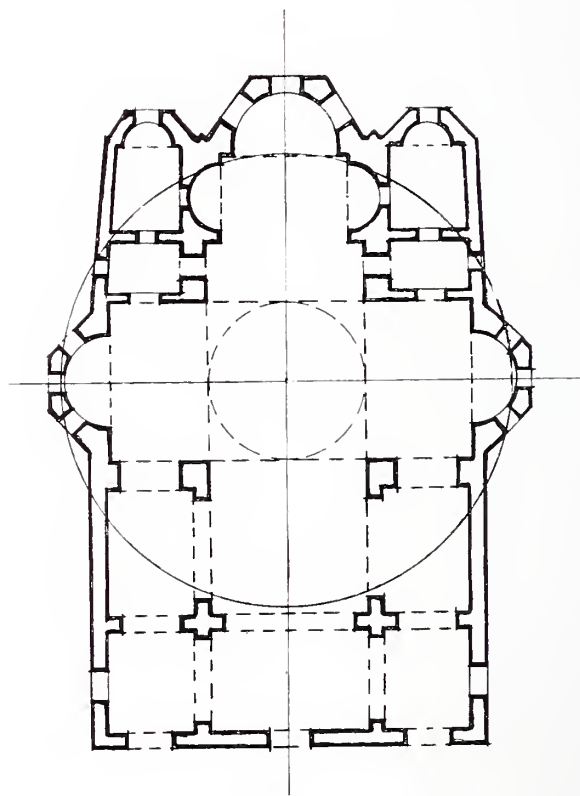


FIG. 2.

<sup>1</sup> The most complete example I know is the very small church of Ayo Iannis, near Phaestos, which has an inscription relating it to Andronicus Palæologus. It was pointed out to me by Prof. Halbherr.

<sup>2</sup> The results here published are largely due to the encouragement and help of Prof. Lethaby and Mr. Schultz, and the cordial interest of Dr. Evans. I also mention with pleasure the courtesy of Prof. Halbherr, Director of Italian Excavations in Crete, in freely permitting me to make a study of a building on a site over which he has the right of excavation.

<sup>3</sup> Camden Society's publications. I am indebted to Prof. Lethaby for this reference.

<sup>4</sup> See E. Falkner's abstract, translated, 1854.

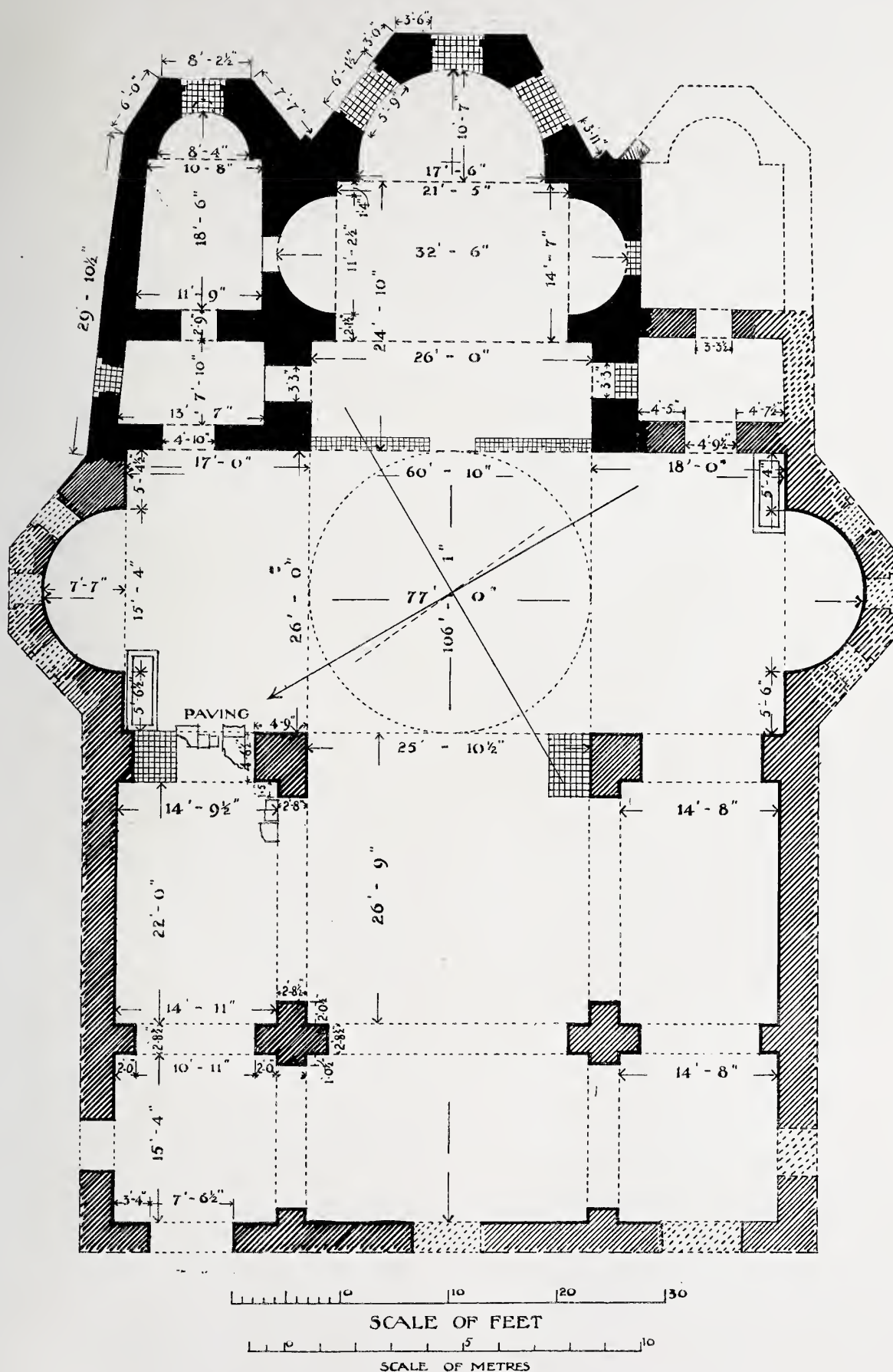
<sup>5</sup> Mr. F. W. Hasluck has called my attention to the chronicles of Nic. Chr. Radziwill (1614), and Joannes Cotovicus (1619), both of which refer to Titus and his church, but to the later church at Candia, undoubtedly. Their mention of the bodily relics of the saint is interesting.

<sup>6</sup> "Relation d'un Voyage du Levant," &c.—1717. Vol. I, p. 61.

<sup>7</sup> "A Description of the East and some other Countries"—1743-5. Vol. II, p. 253. The ruins referred to by Pococke near the south-west corner of the church were perhaps some Greek remains, then unexcavated, and not the archbishop's house.

<sup>8</sup> "Travels in Crete," by R. Pashley—1837.





wrote on Crete as "a wandering scholar," does not mention the church at all. Spratt<sup>9</sup> refers to it at some length, and gives a sketch from the east, showing also the Greek theatre in the hill beyond. Both these writers saw in a ruined state the later cathedral of St. Titus at Candia, since destroyed.

But after all, and more than all, there should be a definite local legend identifying the church at Gortyna with the saint, and this has not yet appeared. Tournefort, writing nearly 200 years ago, noted the ignorance of the ecclesiastics when he inquired about the martyred saints of Ayous Dekka.<sup>10</sup> The same is true to-day. But research in Crete is as yet only well begun. The hagiology of the island, with its kindred subject of folk-lore, has still to be written. It is to be hoped that diligent inquiry may throw some light on the buildings dedicated to its first and subsequent bishops.

#### THE SITE AND THE BUILDING.

Gortyna, or Gortyn, was the representative Greek settlement of Crete. As Knossos declined it rapidly rose to power, and in Roman times was the centre of island domination. It lies on the northern border of the great southland plain of the Messará, which is only separated by a low fringe of hills from the Libyan Sea. North of it are great mountain passes, so that from one aspect the site has the makings of a fastness. The Greek theatre is in a cleft of the hill-face; in the plain immediately below is the church of St. Titus, within a few paces of the most famous Greek monument in Crete, the finely built wall incised with the inscription of the Laws of Gortyna; adjacent is the well-set-out plan of the Græco-Roman town and temples; stretching further out into the plain are Roman remains. The approach from the south-west has a certain impressiveness. The brooding olive-groves, the wild and gloomy character of the hills beyond, the shapeless ruins that rise up here and there, the narrow path choked with stones, winding between field walls half built of antique fragments, all combine to stamp this veritable "Campagna" of Crete upon the memory.

About nine miles to the west Gortyna had easy access to the sea, near the Minoan sites of Phaestos and Aya Triada. The coast line stretching south from this point ends in a sharp promontory, round which is a natural harbour much used by small

craft beaten thither by the south winds; this is Kale Linenes, the "Fair Havens" of St. Paul's narrative.<sup>11</sup>

The site of Gortyna is as yet only partially excavated, so that much of the church of St. Titus that might be of interest remains hidden. The orientation of the building is almost exactly the same as that of Sta Sophia at Constantinople. The apse of St. Titus might face  $32^{\circ}$  south of east as against  $33\frac{2}{3}^{\circ}$  for Sta Sophia.<sup>12</sup> There is every reason to believe that the plan (Fig. 1) is complete as now existing, though the exterior walls appear to have been largely rebuilt. There is certainly some later work (shown by cross-hatching), but leaving this out of account as unimportant, the different parts hang together as one structure.

A circle can be drawn round the centre to nearly touch some salient points in the plan, which therefore shows something approaching a Greek cross (see diagram, Fig. 2). The south arm of the cross is exactly one foot longer than the north, but this apparent error in setting out has been corrected in the western aisles, so that the symmetry of their vaults would not be affected.

The planning of the east end shows what appears to be a trifoliated apse, but strictly speaking there is only one apse, with two subsidiary semi-domed recesses containing doors to the side chapels. The cross section (Fig. 3) is taken through these side recesses and shows the weakest point in the support of the chapel vault. Above the recesses are heavy piles of loose masonry, counterbalancing the thrusts of the semi-domes and the central vault. The western end of the north chapel is one foot wider than the eastern, owing to the skewed plan of the north wall; in consequence, the keystone course in the vault is tapered to a point at its eastern end. The plan of the western chamber of the south chapel exists complete. The remainder of this chapel is destroyed above ground, though the plan might be disclosed by excavation, the ground outside being at present level with the door lintels. The first springing courses of the vault show on the north wall.

The upper structure of the central and western parts of the church is now only problematical (see longitudinal section, Fig. 5), but the uniform widths of the arms of the cross, giving a square form at their intersection, clearly point to four great barrel-vaults stopped with arches foursquare,

<sup>9</sup> "Travels and Researches in Crete," by Capt. T. A. B. Spratt, R.N., &c.—1865. Vol. II, p. 31, &c.

<sup>10</sup> Ten local saints who suffered in the Decian persecution of A.D. 251. The village church dedicated to the ten is without interest.

<sup>11</sup> Acts xxvii. 8.

<sup>12</sup> See Antoniadi in *Knowledge*, Feb. 1903. Messrs. Lethaby

and Swainson's opinion (confirmed by M. Antoniadi) is that the axis of Sta Sophia was meant to point to sunrise at the winter solstice, the date of the nativity of Christ, to whom Sta Sophia was dedicated. This rule applied to St. Titus would agree well enough with January 4, the Latin Church day of the saint, but not with August 25, the Greek Church day.





(a) General view. (b) View of east end. (c) North side.  
(d) Recess on north side.

(e) Roof over east end. (f) Doorway to western chamber  
of South Chapel. (g) General view from north-west.  
(h) Doorway in recess, north side.

(f), (g), and (h), from photos. by Georg. Karo.

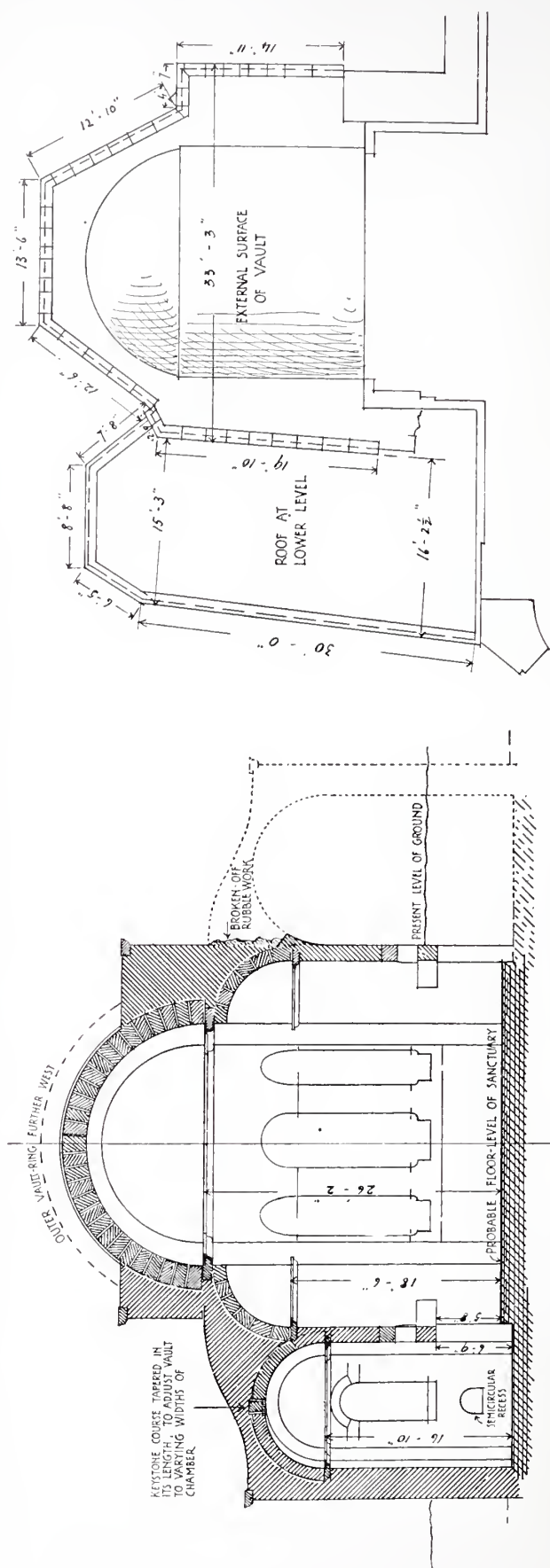


to carry a central dome on pendentives. This construction, we have seen, is confirmed by Onorio Belli. The height of the pier arches and the upper structure of the narthex are very doubtful points in the diagram here given.

Details of interest, more or less observable from the drawings and photographs, are the arched window-heads with their irregular-cut voussoirs, large keystones, double-rebated jambs and deep sill-courses hollowed out; the doors, all trabeated as well as arched (with the exception of the wider west doors to the chapels, which are only arched), their lintels generally consisting of three keyed stones, having recessed soffits to take wooden beams bearing on recesses in the jambs; and the impost mouldings, varying in size but of one character throughout. The massive stonework is of large limestone blocks of a light greyish-yellow colour, in parts as if fresh from the tool of the worker, but where not exposed to the light much punctured and honeycombed with decay. The lower courses in the apse are finely set out, and whether through accident or design there is some banding of stonework in narrow and deep courses above the south-west door to the north chapel. It is to this that Pococke probably refers when he says, "I observed in the walls one tier of the stones laid flat, and another set up on end alternately, after the very antient manner of casing with hewn stone."<sup>13</sup> The interior of the north chapel is beautifully built, and the small arched window-heads show perfectly cut stones. The gap below one of the windows is noticeable, and must have been intended for a narrow door (see Fig. 6).

Tournefort, Pococke, and Spratt all mention a Greek inscription visible on a square stone over the central east window, outside. Pococke also refers to "two defaced inscriptions on the outside of the walls to the north."<sup>13</sup> It can safely be asserted that these inscriptions are now either totally defaced or have been removed from the building.

There is no carved ornament of any kind existing in position, except a cross in relief on the inside wall of the apse, between the central and northern window arches (see Fig. 7A and longitudinal section), and some incised signs on a



Plan of Roofs.

Cross-section through Sanctuary and Side Chapels, looking east. Measured and drawn by Theodore Fyfe.

FIG. 3.—CHURCH OF ST. TITUS AT GORTYNA.

<sup>13</sup> Op. cit. Vol. II, p. 253.



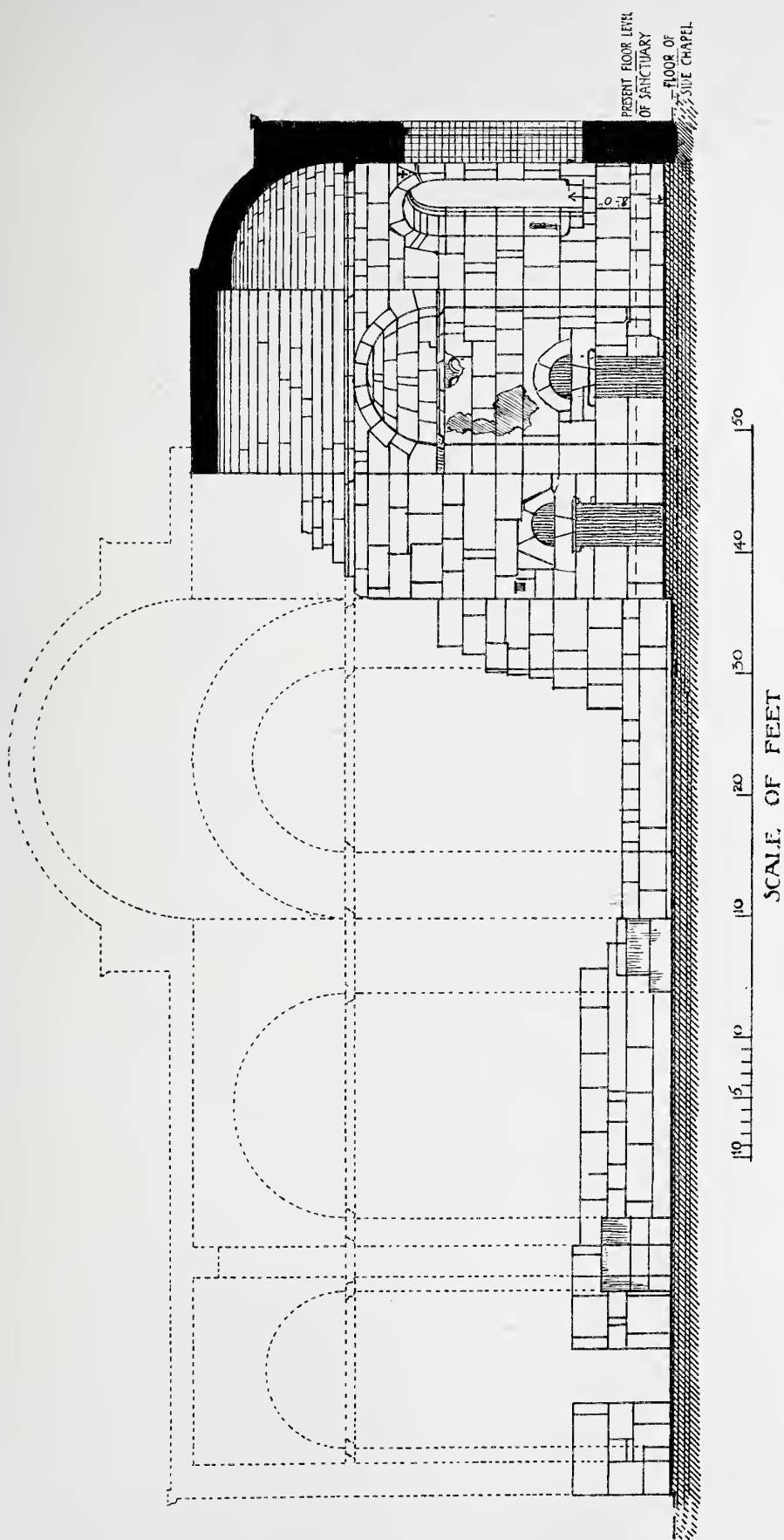


FIG. 5.—LONGITUDINAL SECTION LOOKING NORTH.  
MEASURED AND DRAWN BY THEODORE FYFE.

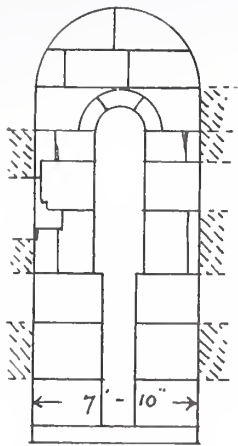


FIG. 6.—ELEVATION OF NORTH WALL OF NORTH-WEST CHAPEL.

stone of the south-east pillar of the narthex (see Fig. 7B). Many fragments of moulded and carved work in a coarse white marble are to be seen lying about, but their design and workmanship are so obviously poor that one must conclude they belong to a later period of ornamentation.

The only evidence of applied decoration in position consists of two fragments of painted plaster in the north recess of the sanctuary below the impost moulding (see longitudinal section); one of which, showing a head surrounded by a halo, much defaced, is evidently the "morceau de peinture" of Tournefort.

It is not at all clear that this plaster represents the original finish, as I found a small fragment of stone with some glass mosaic tesserae in very small cubes firmly embedded to it, evidently part of a large curved surface of mosaic finish.

#### CONCLUSIONS.

In the church of St. Titus we see a building which appears to have more affinity with the stone types of Syria than with the brick and concrete constructions of Old and New Rome. At first sight there seems to be ample ground for Dr. Evans's opinion that it is a work of the fourth century A.D. The prevailing form of door-head, showing a combination of arch and key-stoned lintel, is peculiarly a feature of the rich Roman work at Spalato and Baalbek. The large simplicity of the plan at the east end, with its deep side recesses taken out of solid walls, suggests a

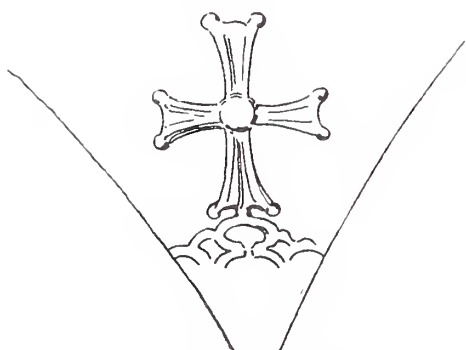


FIG. 7A.—A CROSS CARVED IN RELIEF ON WINDOW SPANDREL OF APSE.

building of early date founded on Roman models, and might suggest that the kernel of this part of the plan is of earlier date than the rest of the structure.

But an examination of the interior walls of the side chapels does not bear out this last supposition; all that exists there is evidently homogeneous with the central apse.

We must suppose either (1) that the building is the earliest domed cruciform church of important size yet known to us, or (2) that it belongs to the time of Justinian, or even later. To discuss these suppositions it is necessary to compare the church with what was being done elsewhere by Byzantine builders.

As may be seen from its plan, St. Titus is a building evolved from the basilica with that strong



FIG. 7B.—SYMBOLS INCISED ON SOUTH-WEST PIER OF NAVE.

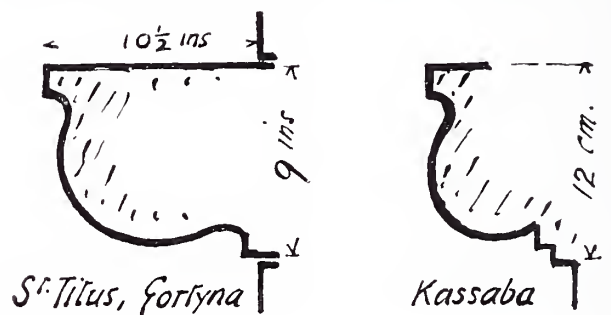


FIG. 8.

approximation to the cruciform type found in many other churches of the (late) fifth, sixth, and eleventh centuries. Following Strzygowski's analytic method,<sup>14</sup> it thus falls into the domed-cross-church type ("Kreuzkuppelkirche"), along with the church at Ephesus, the large ruined church at Philippi, Sta Sophia at Salonika, St. Clement at Ancyra, and other churches; including the greater number of those erected in Greece in the eleventh century, when Byzantine art was revived under the Basilian Emperors. The Cretan church, however, is not only more markedly cruciform than the general early type—in having apsidal transepts projecting from the body of the building, a somewhat rare feature<sup>15</sup>—it also breaks away in having large semicircular side recesses to the sanctuary, which are taken out of very thick walls.

There is, perhaps, no complete parallel in Byzantine work to this most distinctive feature of the plan. The large shallow recesses often found in eleventh-century churches are really due to an

<sup>14</sup> See "Kleinasien," by Josef Strzygowski (1903), p. 131.

<sup>15</sup> There are late Byzantine parallels to this in some churches at Mount Athos. See H. Brockhaus's "Die Künste in den Athos-Klöstern." See also St. Elias at Salonika, in Texier and Pullan's "Byzantine Architecture," Pl. lii.



elaboration of circular forms for the purposes of domical construction,<sup>16</sup> and it has already been pointed out that the recesses at St. Titus are not parts of a true trifoliated apse.<sup>17</sup>

It is important to recognise that the east end of the church, as a whole, is not only of fairly typical but of developed Byzantine character. There is the usual double contraction of the sanctuary and apse, and the usual polygonal exterior forms of the apse and side chapels found in Sta Sophia at Salonika and many other churches.<sup>18</sup> The side recesses to the apse, though particularly large and important, really fall into the general scheme of the plan and are not comparable to the apses taken out of solid walls found in many of the early basilican churches. In other words, the niches of St. Titus, as in all the later work, are the *result* of a certain kind of planning rather than indispensable features round which the plan must be disposed.

I think it is quite clear that there is no fourth-century plan so developed as this, and it would be rash to assume that the (comparatively) unimportant province of Crete would show such an advance in building.

What is true of the east end is also true of the rest of the structure. It is not too much to say that such a large dome as must have existed over the crossing—supported on pendentives resting on comparatively slender piers—would have been quite impossible in fourth-century Crete. The dome over the (so-called) Temple of Minerva Medica, near Rome, which probably represents the highest achievement of the Romans in dome-building, shows a system of corbelling which may have been a first step towards the true pendentive so boldly used afterwards in Sta Sophia; but the advance from one to the other was undoubtedly hastened, in the sixth century, by the knowledge of dome-building as practised in the further East.

Although, as already pointed out, the form of the door-heads is certainly suggestive of Roman

work, the few remaining details have not the same Classic spirit. The Roman Orders are indeed used at Spalato and Baalbek in a way which is quite astonishingly modern; but, however modified in application, their details are always Classic. At St. Titus, however, the main impost moulding has no resemblance to a Classic entablature; rather is it a bold rendering of a softer Syrian form—a modification of the moulding used at Kassaba, compared with it in Fig. 8.<sup>19</sup> It would appear, therefore, that the genuine Classic tradition had passed away in Crete when this moulding was wrought.

The traces of decoration are so fragmentary that they can scarcely be counted as evidence, but the crosses before referred to are more important; these, especially the form of the cross in relief (Fig. 7A), have a sixth-century character.

To conclude, I think it is much more probable that the church belongs to the latter part of the sixth century, at the earliest, rather than to the fourth century. But of whatever date, it is quite early and striking enough to be of some importance in the history of building. The plan is laid out on large lines and with a noble simplicity. What exists of the construction is massive and splendidly built. The use of solid stonework is no doubt partly attributable to the presence of more or less antique buildings in the vicinity, which offered a worked quarry to the mason's hand, as Pococke has pointed out; but partly also such a mastery of stonework might be identified with some influence outside of Crete.

In Syria we know that fine building in stone continued as an unbroken tradition from Pagan times.<sup>20</sup> St. Titus shows the same method of handling, the same massiveness in the forms. The coincidence is indeed strange if there was no communication between Syria and Crete. What we know about early Crete is so meagre that nothing may be provable of this connection; but the fact of the similarity in building remains.

THEODORE FYFE.

<sup>16</sup> For a large example see Schultz and Barnsley, "The Church of St. Luke at Stiris in Phocis," &c.

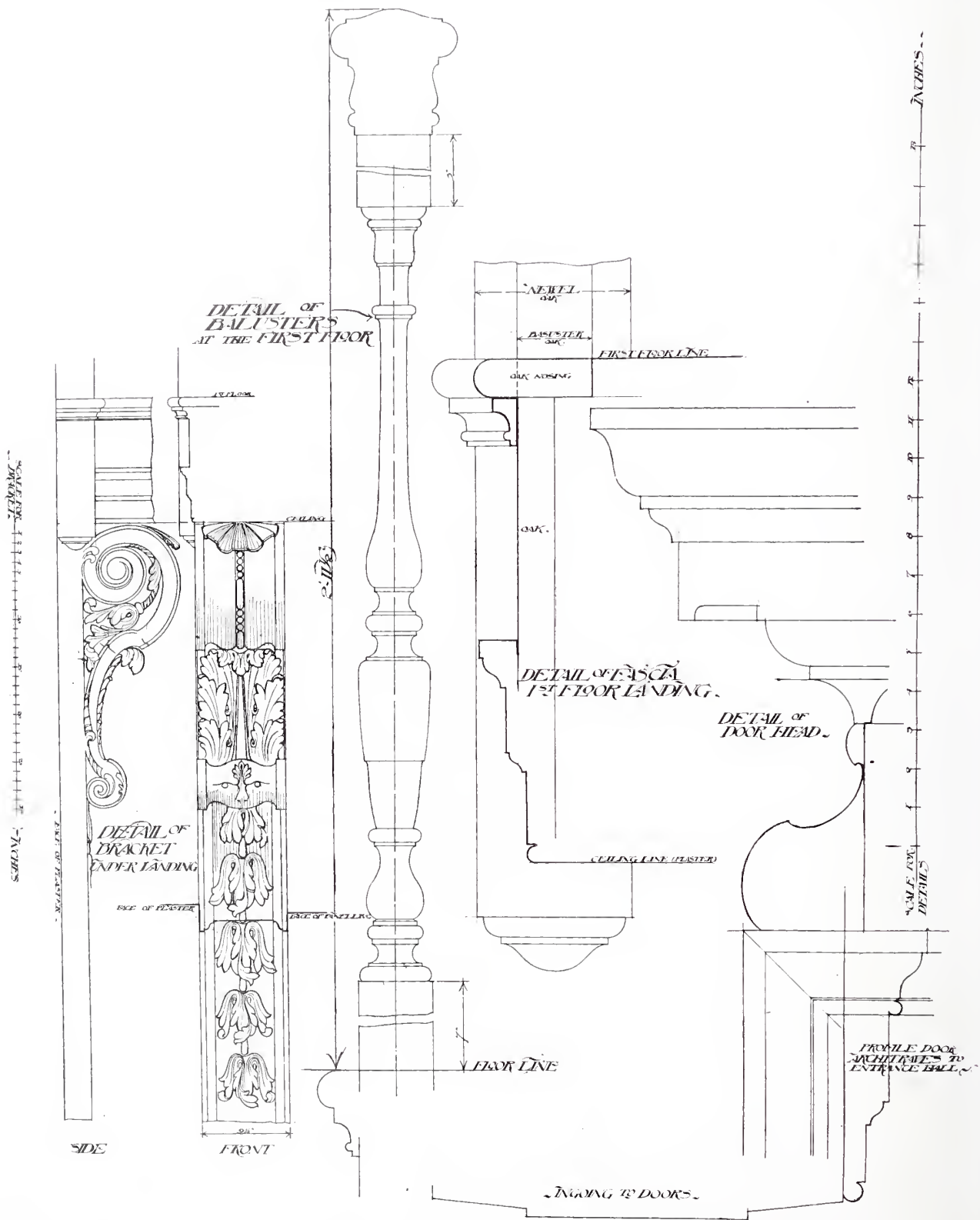
<sup>17</sup> Outside of Armenia, to which it peculiarly belongs, the trifoliated apse proper is rarely found unless associated with a simple basilican plan. But see St. Elias at Salonika (above, note 15); Lethaby's "Mediæval Art," pp. 73-78, 83; and, for the finest examples of triple apses in basilican plans, the Red and White Monasteries of Egypt, in W. de Bock, "Matériaux . . . de l'Égypte Chrétienne," pp. 39-67.

<sup>18</sup> As the church at Kassaba in Lycia, which has much general resemblance to St. Titus in the planning of its east end. See H. Hübsch, "Altchristlichen Kirchen," Pl. xxxii, 3. 4; and C. Texier, "L'Asie Mineure," III, Pl. 205.

<sup>19</sup> From O. Wulff, "Die Koimesiskirche in Nicäa," p. 73.

<sup>20</sup> See, following on De Vogüé's standard work, H. C. Butler in Part 2 (1903) of publication of American Archæological Expedition to Syria

The Practical Exemplar of Architecture.—XV.



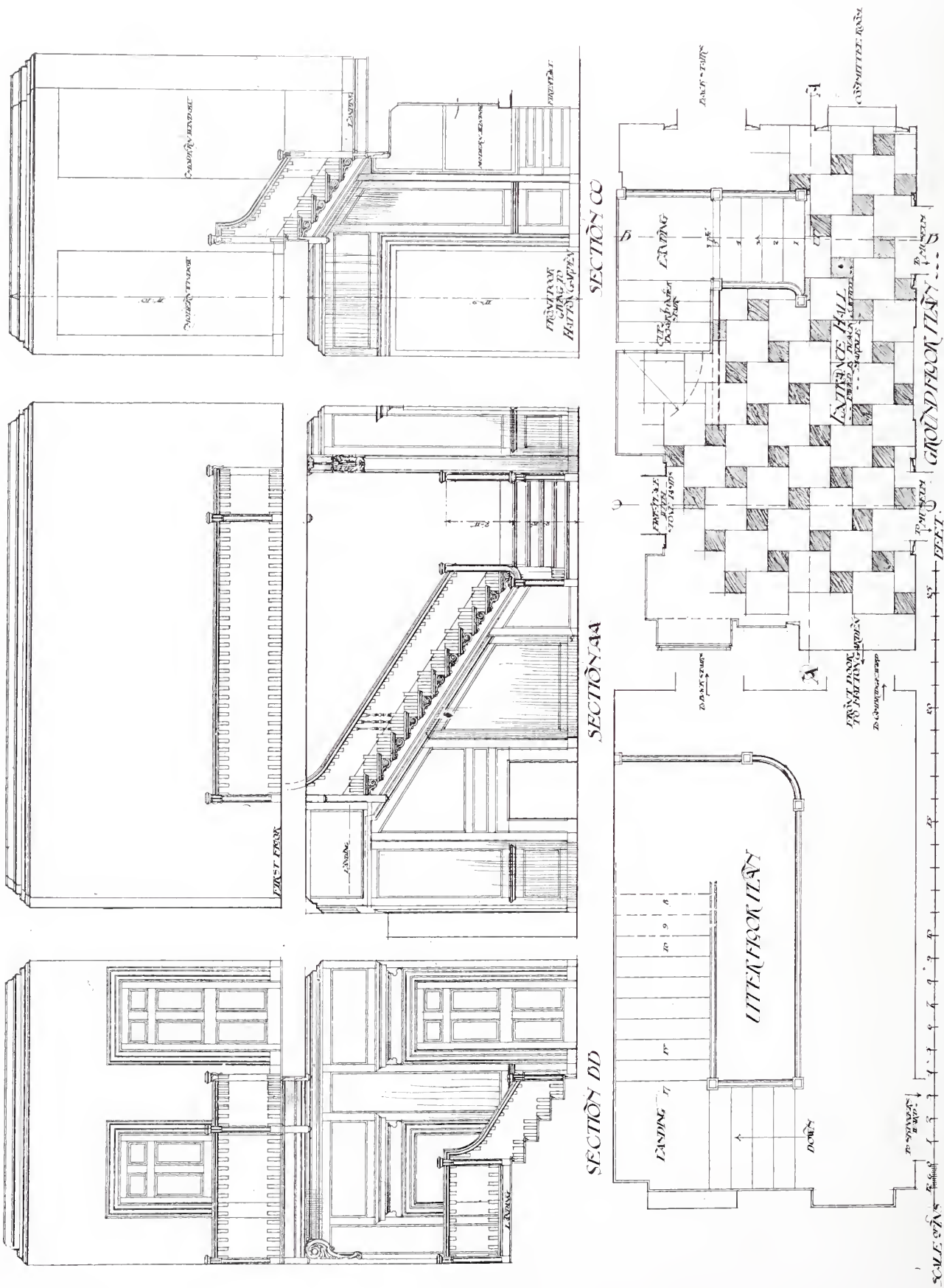
STAIRCASE AT NO. 26, HATTON GARDEN, E.C. DETAILS.  
MEASURED AND DRAWN BY J. M. W. HALLEY.





*Board of Education.*





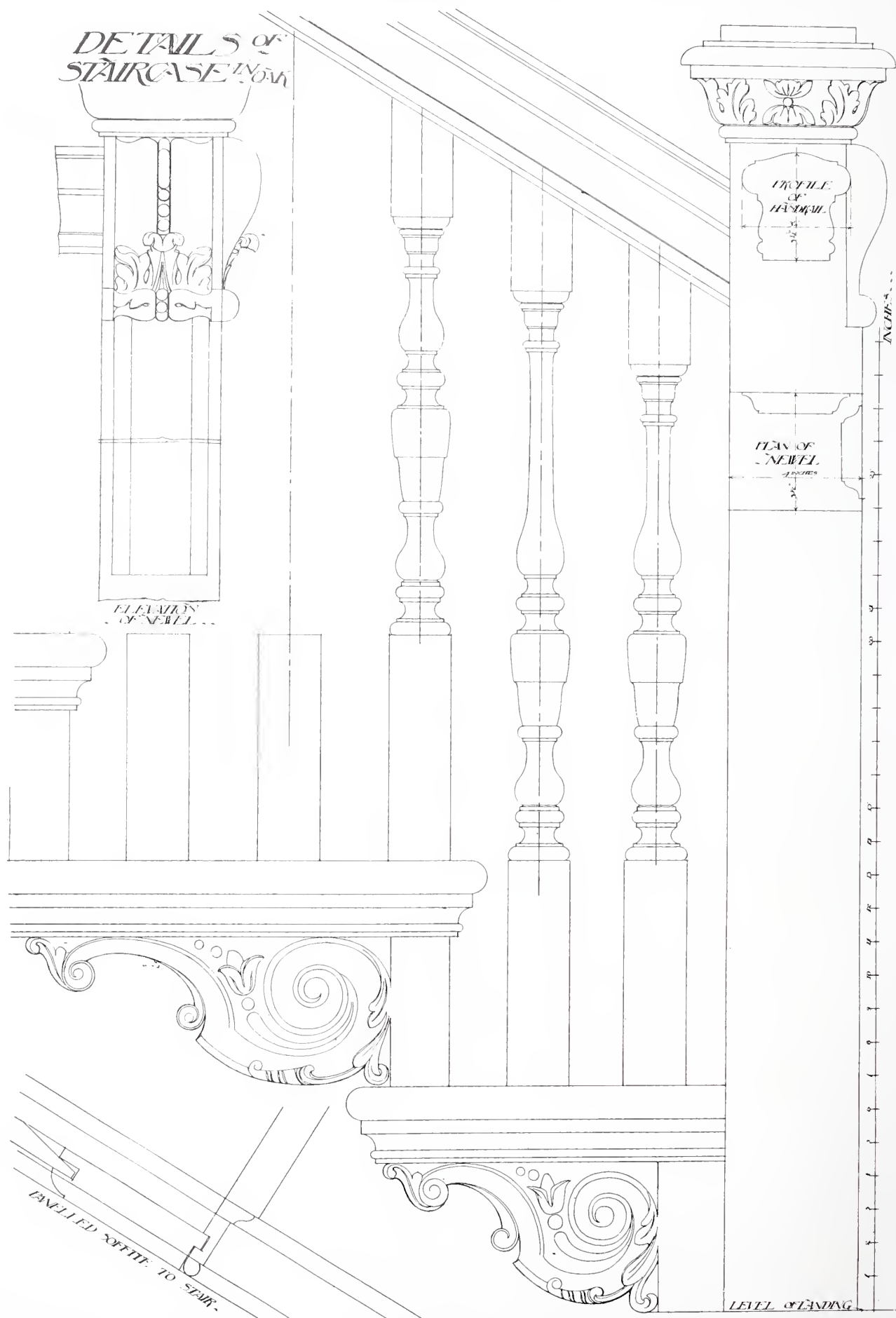
STAIRCASE AT NO. 26, HATTON GARDEN, E.C.  
MEASURED AND DRAWN BY J. M. W. HALLEY.





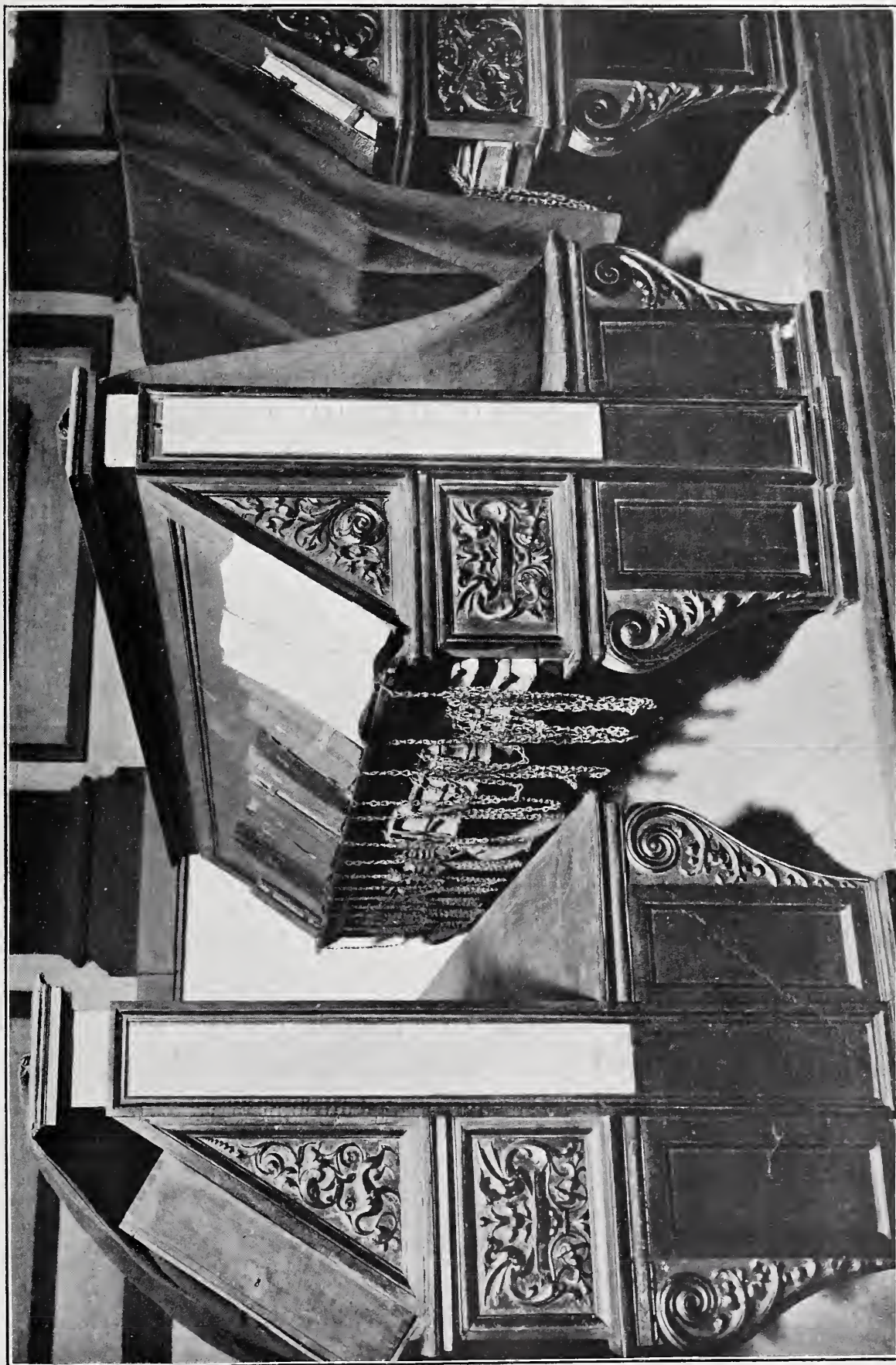
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STAIRCASE AT NO. 26, HATTON GARDEN, E.C.  
DETAIL OF BRACKET, GROUND FLOOR.

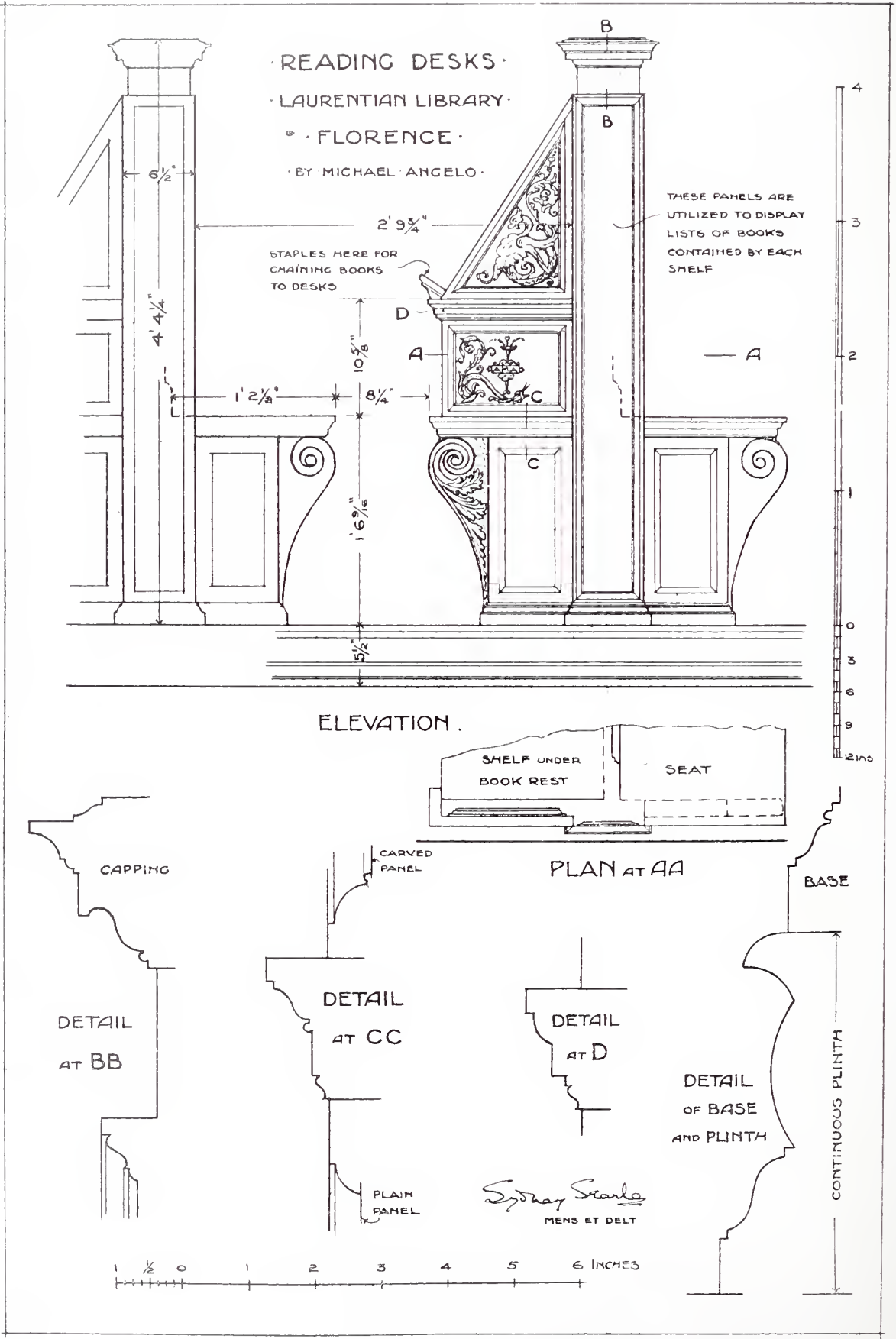


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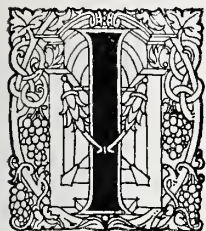
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MEASURED AND DRAWN BY SYDNEY SEARLE.



# Dutch Architecture in Ceylon.—III.



IN a previous article on this subject (ARCHITECTURAL REVIEW, Vol. XII. pp. 111-113, September 1902) I referred to the Dutch Church at Jaffna as a typical example of it. This church is very interesting as showing how effective a build-

ing can be made with simple materials and little attempt at ornament; and the plan of it, which is that of a Greek cross with a wide central area, is especially suited for a modern town church where the object is that as large a proportion as possible of the congregation should be within sight and hearing of the pulpit and altar. It is capable of seating some 600 people. The interior, probably owing to its loftiness and the thickness of the walls, is very cool and airy, and is well lighted by the deeply-recessed windows of the nave, transepts, and chancel, as well as by the four smaller windows of the lantern. It is possible to have too much, or rather too little, of the "dim religious light," and many modern churches in London and elsewhere suffer from this defect.<sup>1</sup> At the same time it is very church-like and reflects

credit on its Calvinistic builders, who in respect of church building in their colonial possessions have had scant justice done them by the late James Fergusson.

As I remarked in my former paper, they were as regards their ecclesiastical architecture permeated with the mediæval spirit. It is curious to note that Heydt's drawing of the Dutch church at Batavia, which was made in 1738, shows that though this building was in the main of a Classical or Renaissance type, with a central dome supported by eight stone columns as the chief feature, the windows of the main building were all of three lights with debased Perpendicular tracery, and those of the lantern were of the same style but of two lights. Similarly those of the Jaffna church might pass for Romanesque. The Gothic or mediæval tradition appears to have survived until late among the Dutch.

It is thought that some further illustrations of this old church, now disused except occasionally, but well cared for by the Ceylon Government, may be of interest. I annex plan and section (Fig. 1) and some views of the church (Figs. 4, 5, 6).

That it is in such a good state of preservation is due to the substantial and massive character of the building qualities which are always found in the work of the Dutch. The walls are from four to five feet thick, built of rubble and coral stone,<sup>2</sup> of which the fort also is constructed, and having a covering of cement. The floor is paved with the rectangular stones something under two feet square, which the Dutch seem to have used for this purpose in all their larger buildings. The pillars, arches, and pediments of the doorways are in the thin yellow bricks that the Dutch also appear to have imported.

The date over the main entrance is 1706, but an older building probably occupied this site, as the church contains tombstones of, *inter alia*, 1666, 1672, 1673, and 1693, let into the floor, and no doubt *in situ*.

The Portuguese church, according to the plan of the fort in Buldæus's book, stood near the opposite corner of the fort green, so that the Dutch would seem to have built a church on a different site, and this church was either rebuilt or a new church built in 1706. I should be inclined to think the former.

The present church possesses the bell of its Portuguese predecessor, bearing the legend N.S. DOS MILAGRES DE JAFANAPATÃO, "our Lady of Miracles of Jaffnapatam," and the date 1648. The bell was until recently in the belfry, but has been removed into the vestry for better preservation.

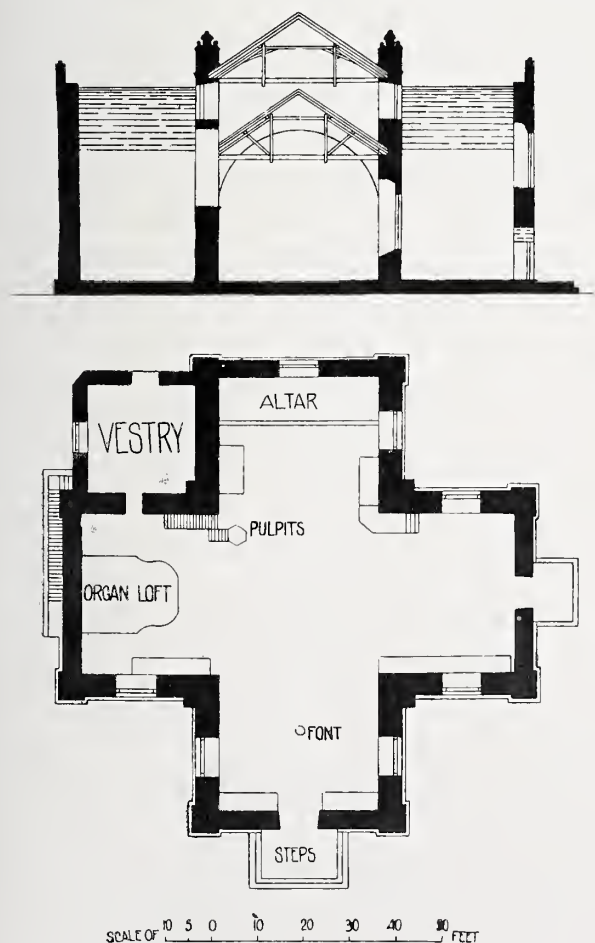


FIG. 1.—PLAN AND SECTION OF JAFFNA CHURCH.

<sup>1</sup> An exception is Holy Trinity, Chelsea, with its large Perpendicular windows.

<sup>2</sup> Coral is still used for building at Jaffna. It is sawn into rectangular blocks.





FIG. 2.—EXTERIOR OF JAFFNA CHURCH, FROM A DRAWING BY C. STEIGER, 1760.

Sketches of the exterior and interior made by the German geometrician and traveller Heydt in 1736<sup>3</sup> show what the church was like in that year, and their fidelity derives corroboration from some water-colour drawings made by a Dutchman, C. Steiger, in 1760, which are preserved in the Rijks Museum at Amsterdam. Figs. 2 and 3 are from photographs of these drawings. The church is little changed at the present day. Both artists represent the lantern as having externally a balustrade carried on the walls at the spring, capped with eight stone or cement bulls at the corners and halfway between each two corners, and the roof of the lantern is more high-pitched than it is at present. The disappearance of these two features is a decided loss to the building, the lantern now being too squat to be effective.

The details of the belfry and finials are rather different, but this may be due to the artists having not paid much attention to copying their exact form.

The interior, too, is much the same. The pulpit is now what is known as a chalice pulpit (see



FIG. 3.—INTERIOR OF JAFFNA CHURCH, FROM A DRAWING BY C. STEIGER, 1760.  
COPIED BY G. H. DE NEISE.

<sup>3</sup> See ARCHITECTURAL REVIEW, Vol. XII, p. 113.





FIG. 4.—WEST FRONT.

Fig. 7),<sup>4</sup> but the shaft or column on which it stands is of different workmanship from the rest of the pulpit, and the old engravings show that originally the pulpit was attached to the wall. The sounding-board is the same as it was, suspended by twisted iron rods.



FIG. 5.—FROM NORTH-WEST.

The present organ gallery, which is of wood, seems to have been erected at the same time as the alteration in the pulpit was made. The organ in Heydt's time stood on a platform supported by stone pillars at the west end, but in 1760 there was a stone platform at the end of the north transept, as shown in the sketch (Fig. 3). The window here has been built up. We need not, however, regret the substitution for the original gallery of the present wooden one, seeing that it has given us the quaint carved and painted panel on which is represented King David,

very bald, harping on his harp and glancing between whiles at the Psalm-book resting on a reading-desk of the eighteenth century, on the

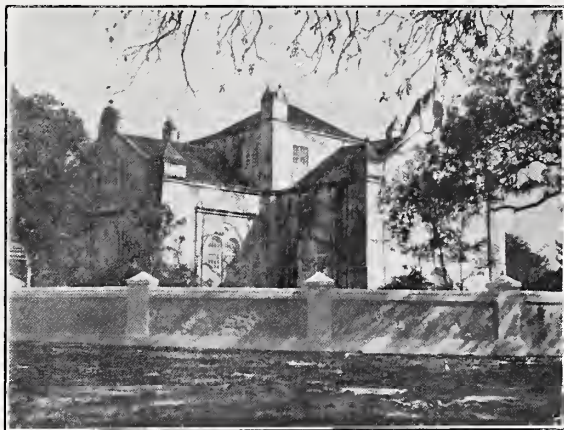


FIG. 6.—GENERAL VIEW.

open page of which is displayed the beginning of a psalm written in the Greek language and alphabet.

The three wooden hatchments shown in Steiger's drawing—one of which is seen also in Heydt's sketch—have, unfortunately, disappeared; but the church now contains a curious and elaborate wooden hatchment on the west wall of the south transept, dated 1769, to the memory of Baron de Pleder of Goldberg in Silesia, commandant of Jaffna. It is in the quasi-classical and sentimental style of the period. His coat-of-arms, surmounted by Time represented by his head and wings only, one wing being folded, is flanked on one side by

<sup>4</sup> This illustration might be compared with that in Vol. XII, p. 116, which shows the same pulpit. The temporary removal of the precentor's desk gives the pulpit some chance of showing its proper proportions. The desk was a later addition.



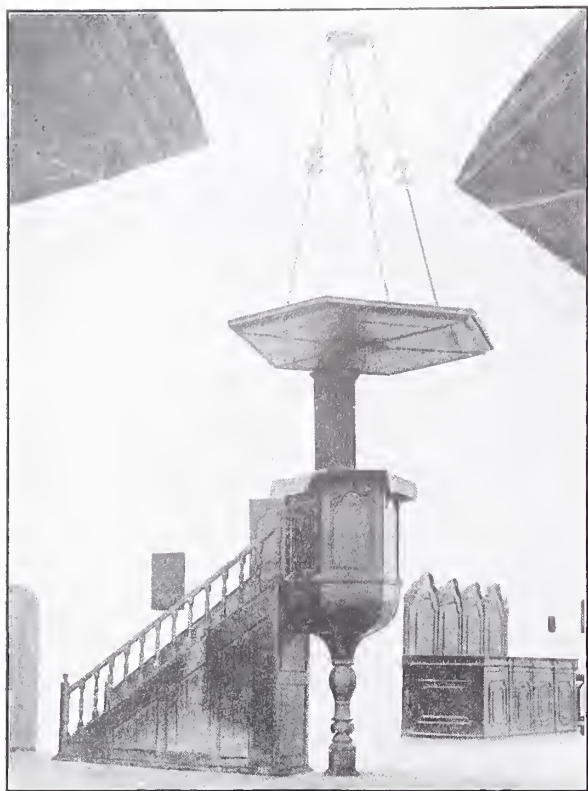


FIG. 7.—THE CHALICE PULPIT.

the figure of a lady in classical costume, who turns away to wipe her tears with a handkerchief; and on the other by a suit of armour and modern military emblems. At the foot a boy reading from a book proclaims with a trumpet the baron's titles and services. At the back, among other flags, is a white one with a gold border, and dis-

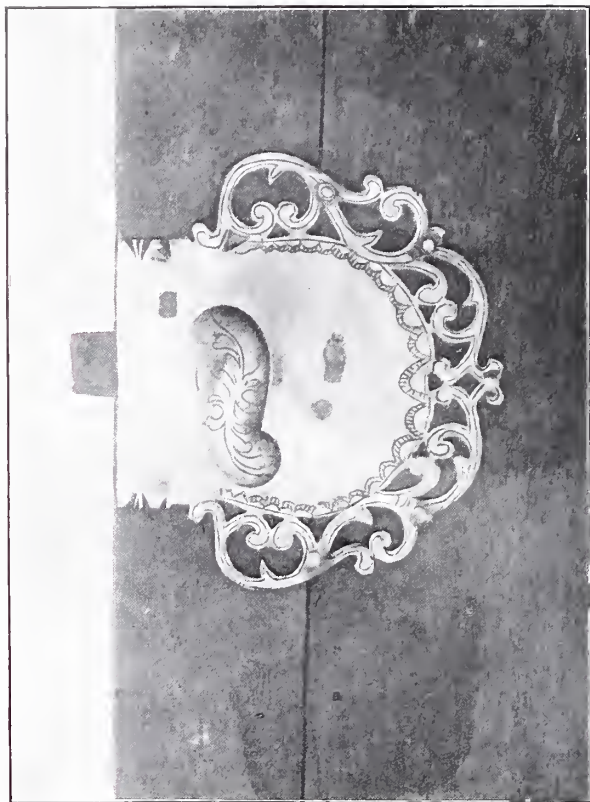


FIG. 9.—BRASS HANDLE AND PLATE ON DOOR OF COMMANDERER'S PEW.

playing the monogram *QV* in gold—apparently the banner of the Dutch Company. The baron is buried under the floor close by.



FIG. 8.—THE COMMANDERER'S PEW.

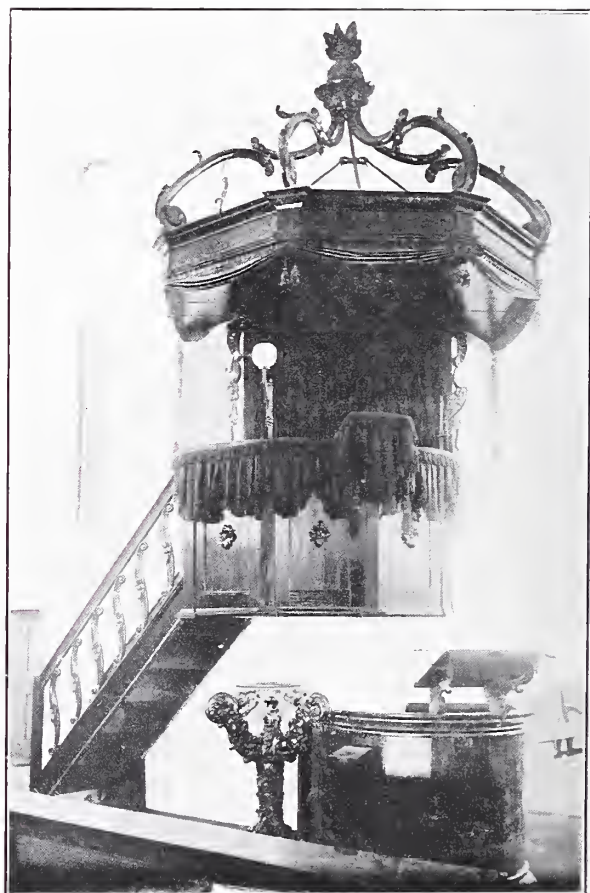


FIG. 10.—PULPIT, WOLVENDAAL CHURCH.



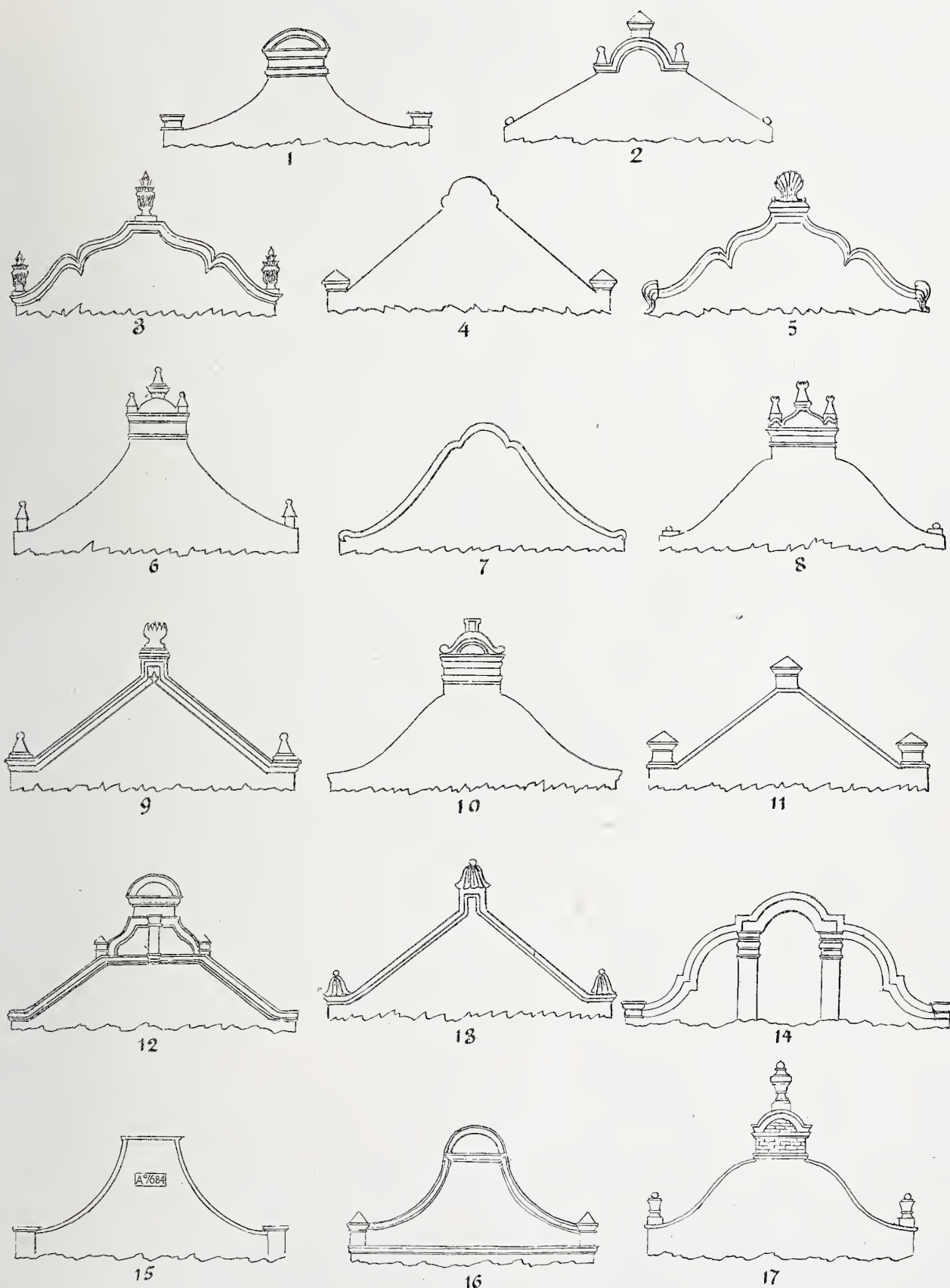


FIG. 11.—DUTCH GABLES IN CEYLON.

The Commander's pew (Fig. 8), which is at the angle of the chancel and south transept opposite the pulpit, has been somewhat altered, and so have the stalls next to it. Both Heydt and Steiger depict the former with twisted columns, which have since been replaced by rounded ones

with capitals. It and the stalls are of different Ceylon woods, the mouldings of the latter being of ebony. These stalls are of typical Dutch outline, surmounted by shells carved in ebony. These ornaments are not shown in the plate, as they had not been found when the photograph was

taken. Four of them have since been found at the back of the stalls—between them and the wall—and replaced in their original position.

There are stalls of plainer pattern the whole length of the western walls of the nave and transepts. Some of the wooden hat-pegs and of the iron brackets for lamps or candles still remain, and there is a wooden peg on the front panel of the pulpit on which the precentor, before seating himself in the desk below, used to hang, just above his head, his three-cornered hat.<sup>5</sup>

The doors have large iron hinges, bolts, and handles<sup>6</sup> of Dutch pattern; that of the Commander's pew is of brass on a brass plate of artistic design (see Fig. 9).

A curious external feature is the staircase leading up the wall and over the gable of the north transept to the west gable, and up this gable to the belfry. I have seen a similar staircase on the inner side of the wall of the church of East Williamston, South Pembrokeshire, also leading to the belfry.

It should be added that the interior was to some extent re-arranged when, in the earlier part of last century, English services were held in it. A platform with altar rails was erected at the east end,<sup>7</sup> and a font supplied at the west. It is probable that there were originally stalls against the east wall, in accordance with the Dutch fashion.

Referring to the subject of pulpits, there are

three of them which are the work of the Dutch still extant in Ceylon, all with large sounding-boards. That in the Galle church is shown on p. 114 of Vol. XII, and I now append a photograph of the pulpit in Wolvendahl church, Colombo (Fig. 10), which has a sounding-board with a canopy like an imperial crown. Like the Jaffna pulpit formerly, and the Galle pulpit, it springs out of the wall.

With reference to Mrs. Trotter's article, "The Origin of the Cape Gable," in *THE ARCHITECTURAL REVIEW*, Vol. XV, p. 35 (January 1904), I annex a page of Dutch gables from Ceylon. These are of the simpler form adapted to the low-pitched roofs of the houses in the streets of the old sea-board towns where the Dutch had their own quarters, apart from those of the natives—sometimes within the walls of the fort, as at Colombo, Galle, and Matara, sometimes just outside it (the Pettah<sup>8</sup>) as at Jaffna and Mannar. Mrs. Trotter remarks "the outline of the Dutch wardrobe is often identical with the gable." I have since acquired in Ceylon a wardrobe and a cabinet (*lessenaar*) with outlines and moulding exactly like those of the top of the doorway shown on p. 34, Vol. XII, and another wardrobe the outline of which is very similar to that of the gables at Stellenbosch (A in Fig. 3, p. 36), only of course with a more obtuse angle at the apex.

J. P. LEWIS.

<sup>5</sup> In Steiger's drawing the windows are not shown to be as deeply recessed as they are in reality.

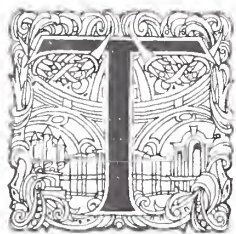
<sup>6</sup> See sketch.

<sup>7</sup> The church happens to stand nearly east and west. The

Dutch did not of course observe the custom of orientation at the time it was built.

<sup>8</sup> Pettah is supposed to be derived from the Sinhalese *pita* = outside (the fort).

## A Design for the Palace of Peace at the Hague.



THE design shown in the accompanying drawings was sent by the authors, Messrs. J. M. W. Halley and E. Godfrey Page, to take part in the recent competition, and was placed by the jury of assessors in the first forty-four, and to that

extent, at any rate, it did no worse and no better than any British design.

The further elimination, till the best seventeen remained, left no work which was not Continental or American. Of these the six which obtained

prizes were all of that character known as modern French: either extremely academic, or, like that of the winner, M. Cardonnier, of Lille, exuberant in detail and fantastic in massing.

The function of the building was simple, being primarily to provide a court where cases referred to the International Tribunal of Arbitration could be argued by the counsel retained by the Powers concerned, and the deliberations of the Board of Arbitration could take place. It was therefore akin to an ordinary court of justice, with the difference that the cases to be tried would be few in number at any one time, and that the dignity



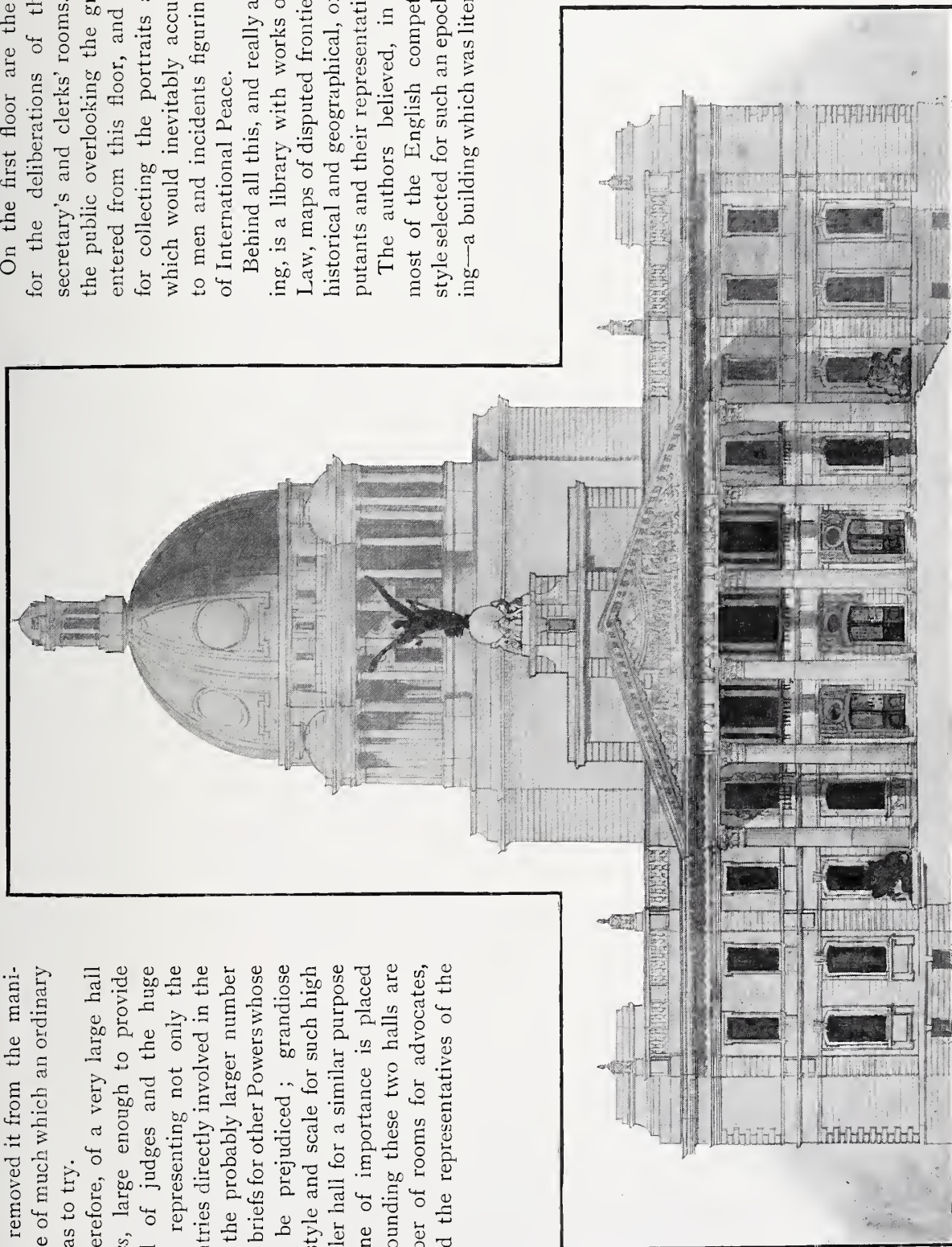
of the argument removed it from the manifestly petty nature of much which an ordinary court of justice has to try.

It consists, therefore, of a very large hall for *causes célèbres*, large enough to provide for a full board of judges and the huge array of counsel representing not only the two or more countries directly involved in the dispute, but also the probably larger number holding watching briefs for other Powers whose interests might be prejudiced; grandiose enough, too, in style and scale for such high politics. A smaller hall for a similar purpose on a lower plane of importance is placed next to it. Surrounding these two halls are disposed a number of rooms for advocates, ambassadors, and the representatives of the Powers engaged.

On the first floor are the private rooms for the deliberations of the court, with secretary's and clerks' rooms. A gallery for the public overlooking the great hall is also entered from this floor, and a large gallery for collecting the portraits and documents which would inevitably accumulate relating to men and incidents figuring in the cause of International Peace.

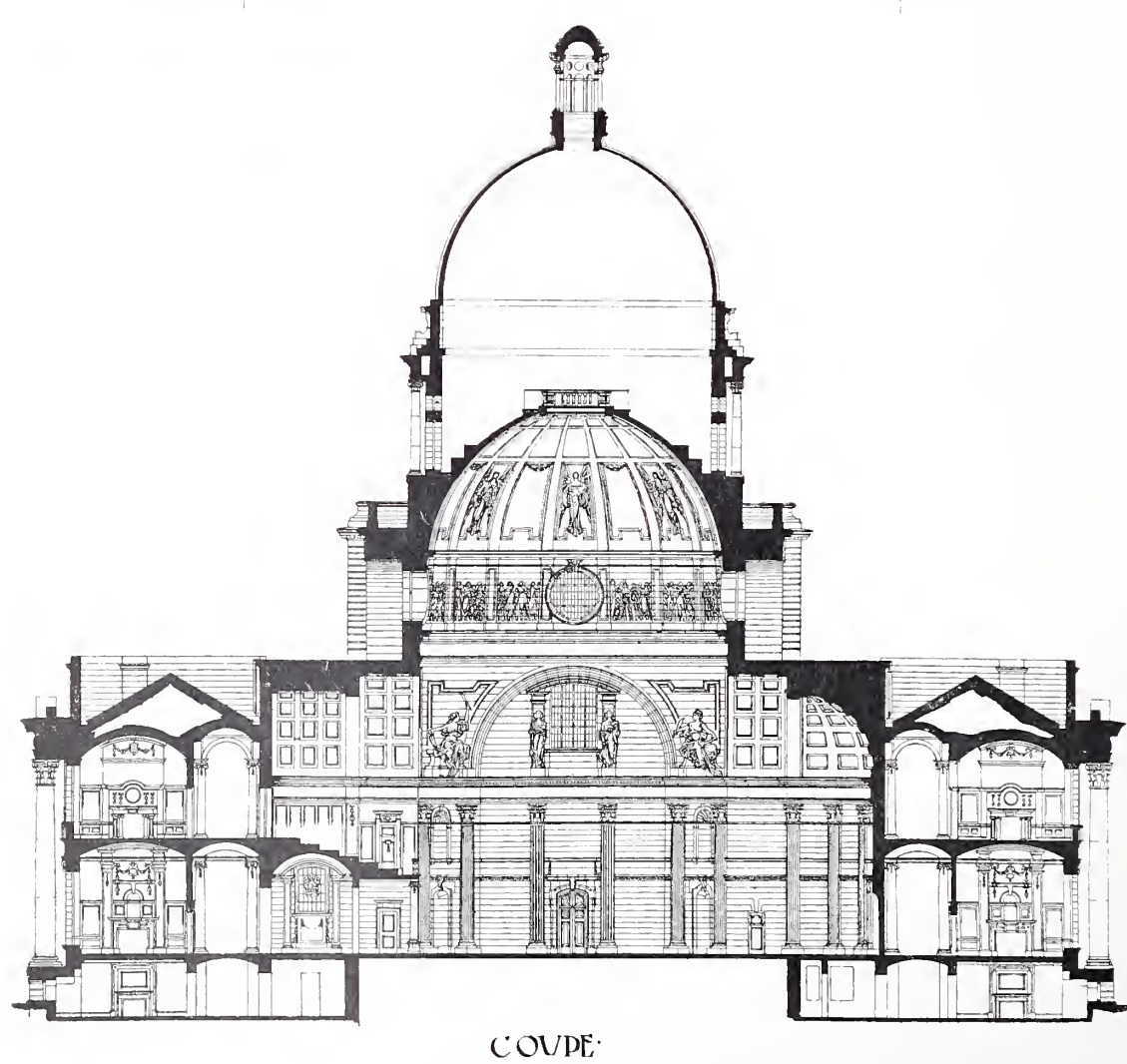
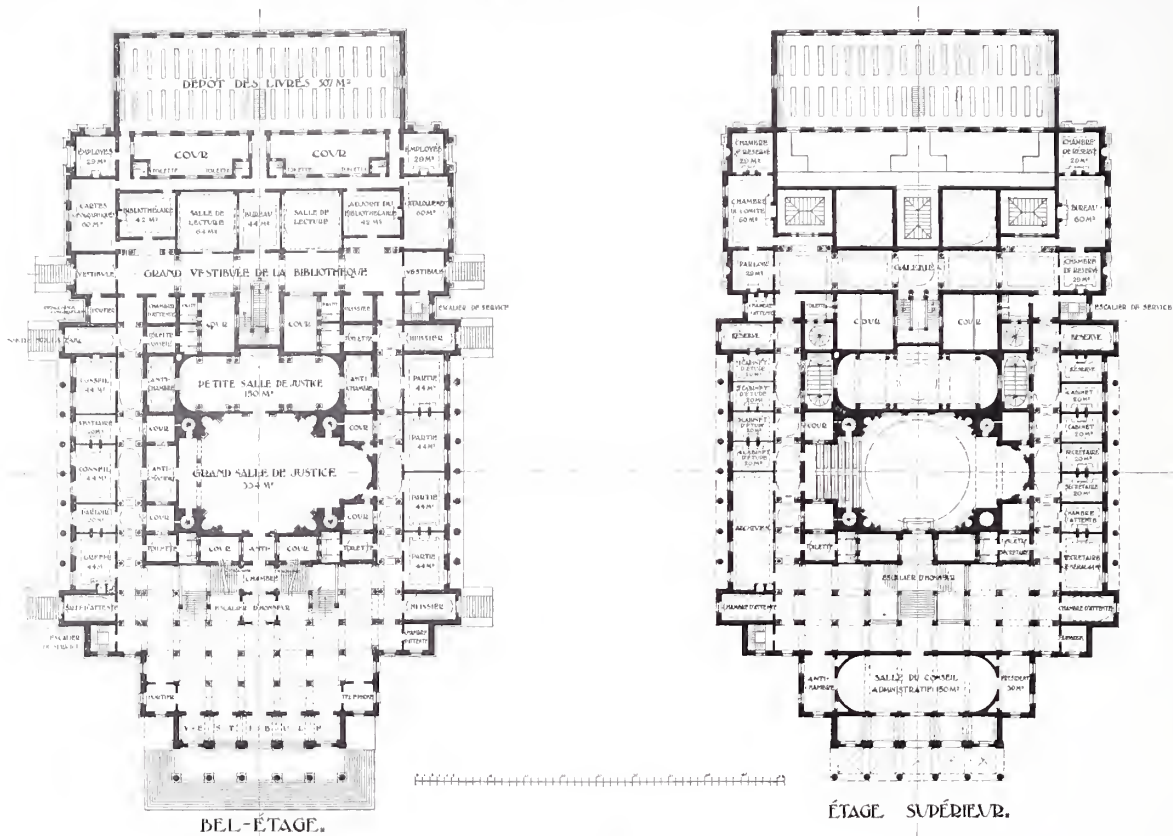
Behind all this, and really a separate building, is a library with works on International Law, maps of disputed frontiers, and records, historical and geographical, of use to the disputants and their representatives.

The authors believed, in common with most of the English competitors, that the style selected for such an epoch-making building—a building which was literally to turn the



THE PEACE PALACE AT THE HAGUE.

DESIGN SUBMITTED BY J. M. W. HALLEY AND E. GODFREY PAGE.





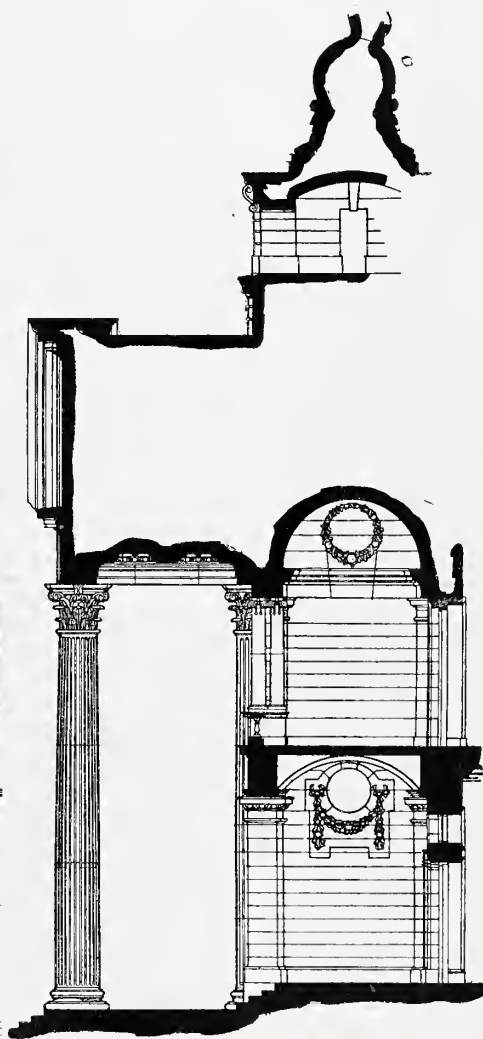
sword into a ploughshare—should be international in character and free as far as possible from local influence.

This view was not shared by the winner, whose design has frankly much of the vivacity and prettiness of the Low Countries in which it is to be built. English architects appear to have

this design was that one—the Italian Renaissance—which despite the wealth of criticism which has been levelled against it, and its occasional undoubted but splendid insincerity, has dominated the world for greater length of time than any which Western civilisation has produced—the style which here in Britain is emerging triumphant



TRAVÉE DE LA FACADE PRINCIPALE.



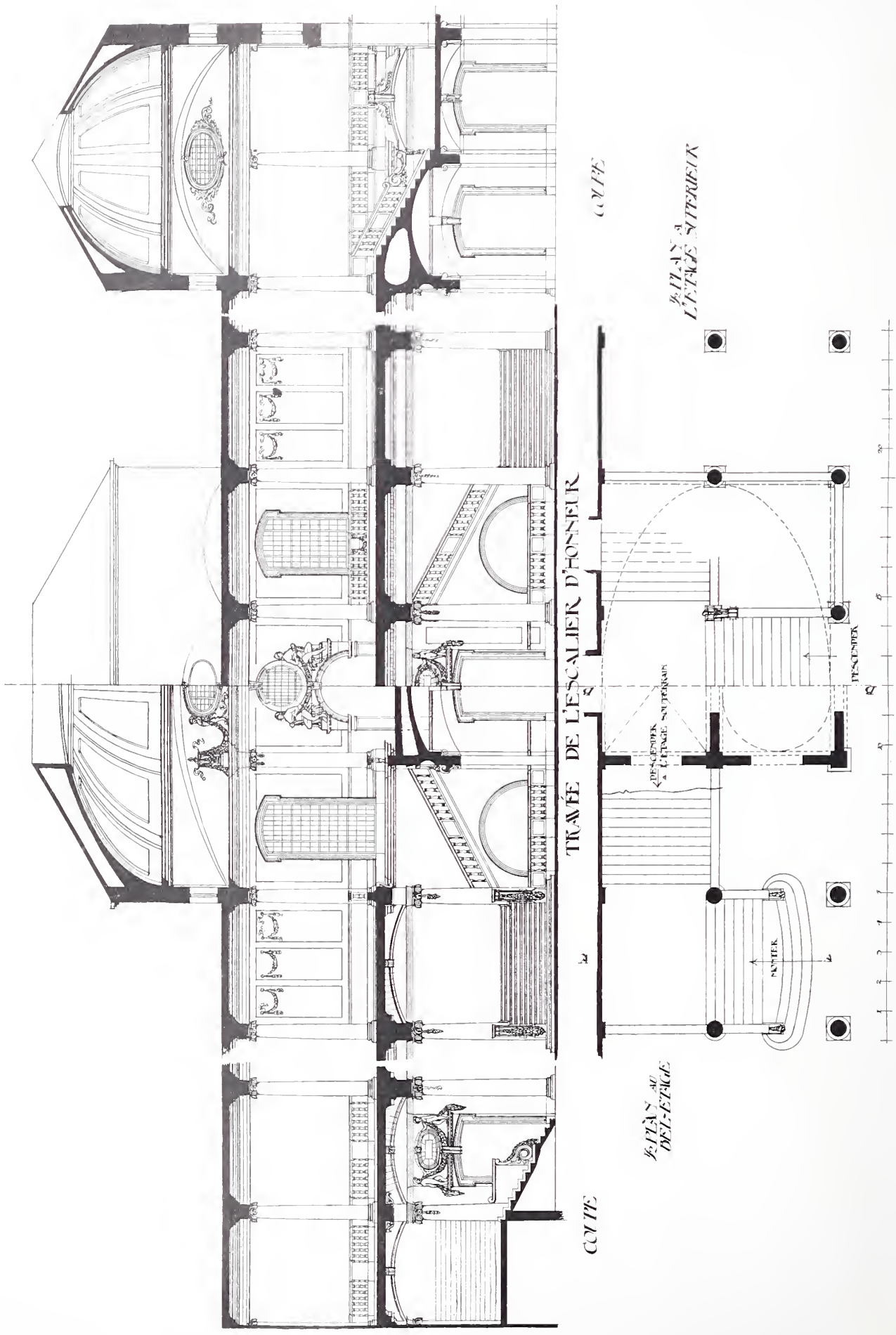
COUPE.

DESIGN SUBMITTED BY J. M. W. HALLEY AND E. GODFREY PAGE.

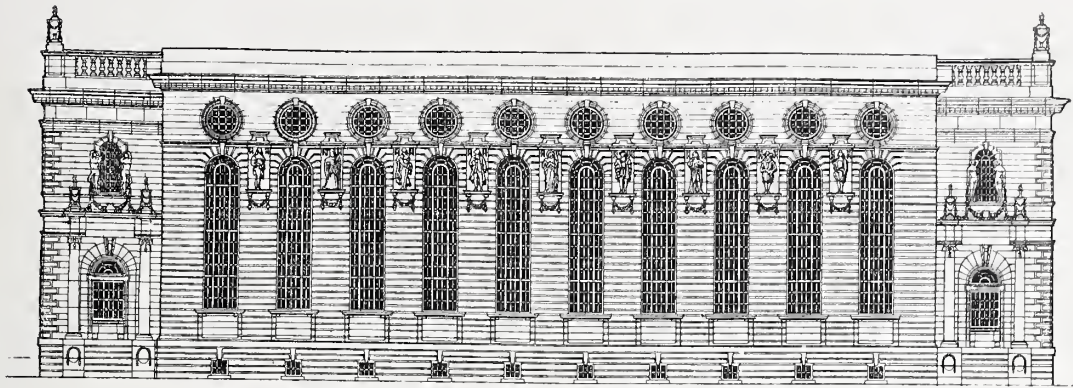
thought, surely rightly, that the style of the "Cockpit of Europe," dainty and debonair as it is, was not the manner in which a building calculated to mark for all time the supreme arbitrament for all nations above and beyond the sword might best express its purpose.

The style chosen, therefore, by the authors of

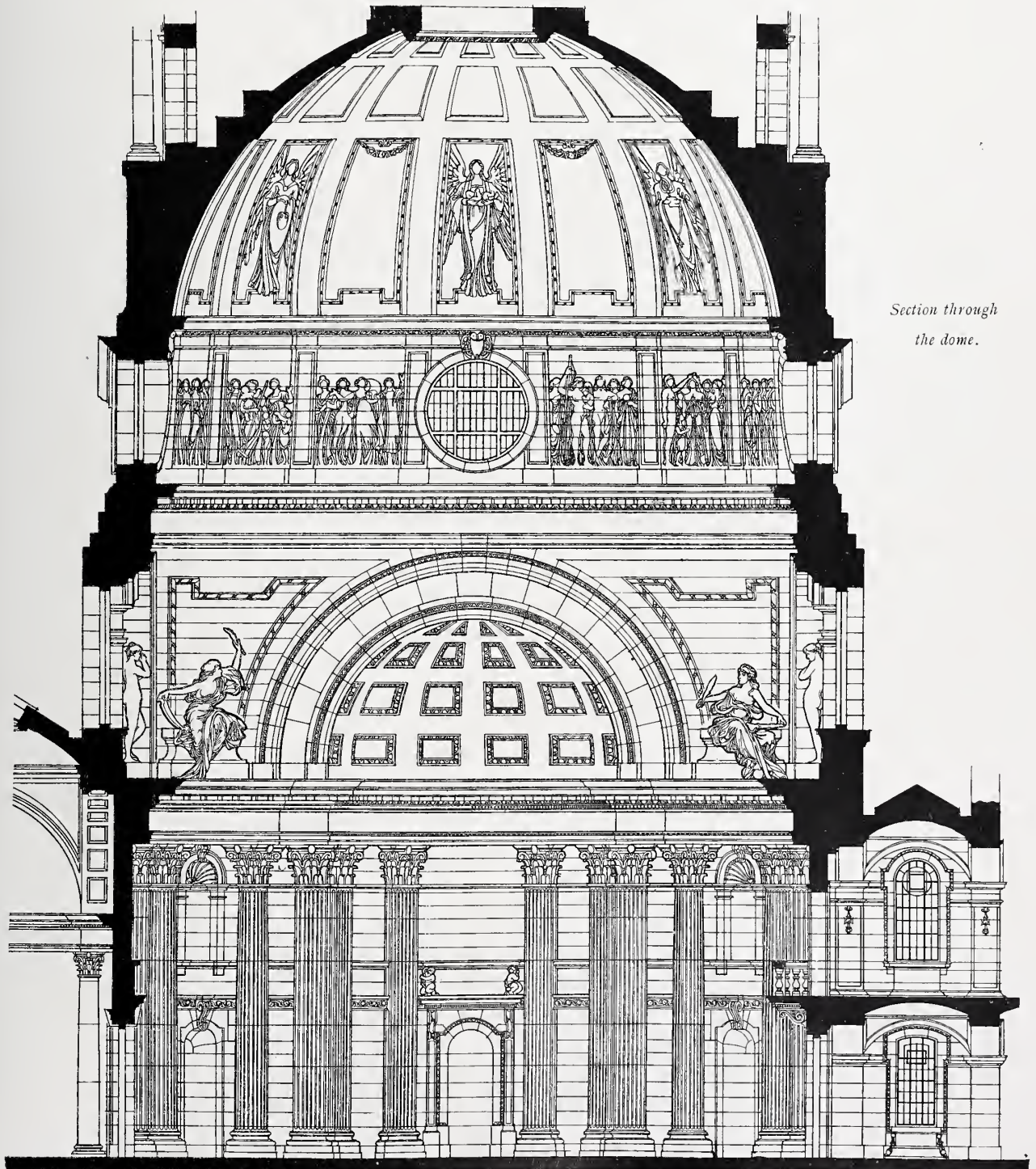
from a struggle with its rival, the Romantic or Gothic revival (the latter represented by the greatest array of individual genius in its protagonists since the fifteenth century in Italy), and which bids fair to become, if its followers be but loyal to their cause, again the undisputed style of the civilised world.







FACADE DU DÉPÔT DES LIVRES.



*Section through  
the dome.*



DESIGN SUBMITTED BY J. M. W. HALLEY AND F. GODFREY PAGE.

VOL. XXII.—G



# Books.

## LE ORIGINI DELL' ARCHITETTURA LOMBARDA.

*Le Origini dell' Architettura Lombarda, e delle sue principali derivazioni nei paesi d' oltr' Alpe. G. T. Rivoira. Ermanno Loescher & Co., Roma.*



WITH the exception perhaps of our own country, none other has had its earlier architectural antiquities so diligently explored and illustrated as Italy. This is but natural; for no other land can show a series of early buildings so complete in sequence, or so interesting historically to the student of architecture. Nowhere else can we trace step by step so clearly the coming to life and early growth of the styles of modern Europe out of the decadent art of the older civilisation. Nowhere else is it less difficult to ascertain exact dates, and to fix certain buildings like stations at intervals on the path of history round or between which to group others in something like true chronological order.

To the task of elucidating and illustrating their early monuments, Italian archæologists have applied themselves with ardour. It is true that they are not always in good accord. In their zeal they fall foul of one another, and depreciate the work of rival inquirers somewhat virulently, reminding one of the way in which each successive German editor of a Greek play belabours his predecessor with his coarsest Latin epithets. Patriotic feelings also, for which due allowance must be made, have to some extent coloured their views and influenced their conclusions. But there can be no question of the pains and diligence with which they have set about their task, and of the extreme value of the collection of examples they have got together, even though we may not always be able to accept their theories absolutely and entirely.

Of the works so produced, that by Signor G. T. Rivoira is the latest and most remarkable. If for nothing else his book will always be valuable as an encyclopædia of examples of early Italian architecture, collected with infinite pains, arranged systematically, and intelligently described. His net is spread far and wide, and encloses examples akin to his subject not only in the European lands of the Byzantine empire, but in Syria, Asia Minor, Palestine, North Germany, England, and even Mashonaland. In his preface, Signor Rivoira

tells us that except a very few examples in Persia and Syria—we assume also in Mashonaland—which he hopes to visit shortly, he himself has studied on the spot all the architectural works of which he gives examples. Few men have taken such pains or earned so good a title to the patient and careful study of the result of their labours.

The author explains at the opening of his first chapter the purport of what follows:—

Without denying—it would be folly to do so—the part played by the East in the birth of the arts of the West, I do not believe as many do that from the time when Honorius transferred the Imperial residence to Ravenna (A.D. 404) to the fall of the Lombard kingdom (A.D. 774) every time Italy wanted to produce something above a barbarous level she had to turn to the artists of the East whether for painters, mosaicists, goldsmiths, and inlayers, or for architects or constructors.

On the contrary, he attributes the best works of architecture in the Exarchate of Ravenna, the Lombard kingdom, or the Duchy of Rome, to native workmen, mainly of Ravenna; and those of sculpture, from Theodoric to Justinian, 493–565, mainly to Greek artists at first, and afterwards to native artists, chiefly Ravennate, working in the Byzantine manner.

It necessarily detracts a little from the weight which the book carries, that it should at the outset declare itself to be written with a purpose, and to prove a certain theory. It would have been better if the theory had been allowed to discover itself in the process of inquiry, and if the author had taken the reader along with him in his argument, so that they might reach his conclusions together.

The transference of the seat of empire to Ravenna by Honorius A.D. 404 naturally attracted to that city the best artists from Milan, and the new building operations resulting from the conversion of a mere provincial town into a capital gave them ample scope for their artistic efforts. Before the middle of the century were built the churches of S. Apollinare in Classe, S. Francesco and S. Giovanni Evangelista; the Chapel of S. Piero Chrysologo; the mausoleum of Galla Placidia, and the Orthodox Baptistry. These buildings our author says “showed, either in ground plan or internal decoration, original arrangements or motives which formed a new style—the style which I call Romano-Ravennate.”

Among the original features of these buildings, which, as he points out, preceded Sta Sophia at



Constantinople by some eighty years, he claims the Pulvino—dosseret—or impost block, forming a second capital, which has generally been considered a Byzantine invention. It occurs in S. Giovanni Evangelista at Ravenna, to which he assigns the date of 425, but does not appear at Constantinople till some time later, and Fergusson remarks that it was never popular there. Our author seems to trace its origin rather to the suggestion of the short entablatures on the coupled columns of Sta. Costanza at Rome, which was built after 350. As, however, he admits that it appeared in the basilica of Eski Djuma at Salonica, to which he assigns the same date as that of S. Giovanni Evangelista at Ravenna, and as the architecture at Salonica is confessedly Byzantine, it is difficult to accept his conclusion absolutely.

It is still more difficult to follow Signor Rivoira in his argument that the pendentive is an old Latin invention, and not, as we have always supposed, the crowning glory of Byzantine construction. The instance he gives is the mausoleum of Galla Placidia. But the vault there is not carried by true pendentives. It is an imperfect dome, with four segments cut off on vertical planes corresponding to the four sides of an *inscribed* square. The construction by true pendentives is something more than this. They are formed by taking such a domical vault as that of Galla Placidia's tomb, and cutting off the upper part on a horizontal plane at the level of the crown of the four semicircular arches that resulted from the first operation. From the margin of the ring so formed Anthemius of Tralles, at S. Sophia, started afresh with another dome corresponding to a circle *inscribed* within the square of the ground plan, while the pendentives were the remains of a dome *circumscribed* about the same square plan. This is real construction by pendentives, and the glory of its invention seems to belong beyond all question to the Byzantine artists, or at all events that of its application on a monumental scale; for the example which Signor Rivoira gives of a little tomb on the Via Nomentana near Rome is unimportant.

Another decorative feature of which our author attributes the invention to the Romano-Ravennate school is the cornice of brick arcading springing from corbels, or from corbels alternating with or grouped between flat pilasters. Whether or not this originated with this school, at all events decoration of this kind became highly characteristic of the architecture both Lombard and pre-Lombard in Italy, and the transalpine architecture which was founded on the Lombard type. The use of blank arcading in the outer walls as a decorative feature is also claimed as of Ravennate origin, appearing in the apse of S. Giovanni

Evangelista in the year 425, on the outside of Galla Placidia's tomb A.D. 449, the Orthodox Baptistery A.D. 449-458, and at S. Francesco A.D. 433-458. The denticulated brick cornice is another Ravennate feature, and the construction of vaults and domes by amphoræ or earthen jars inserted into one another, which was employed in the sixth century in Justinian's church of S. Vitale, is found at Galla Placidia's tomb as early as 449.

Among other features which Signor Rivoira claims as originating with the architects of Ravenna is the apse polygonal outside and round inside, which is to be found at S. Giovanni Evangelista built in 425, and on the authority of old drawings occurred also in the vanished "Ursiana," or Cathedral of S. Ursus, in Ravenna, but which is not found at Constantinople till 463.

In the buildings erected at Ravenna after the reign of Theodoric, our author recognises and distinguishes two influences: the Romano-Ravennate, which is that already dwelt upon, and the Byzantine Ravennate. He claims as work of native artists such buildings as the churches of S. Vitale at Ravenna, S. Lorenzo at Milan, S. Apollinare in Classe, and the Basilicas of Parenzo, Pomposa, Bagnacavallo, and Grado. So far from these being the work of Byzantine artists, as has been generally supposed, he holds that the Greeks had nothing to do with them except, perhaps, as sculptors and mosaicists. The capitals indeed at these churches, he confesses, betray the Byzantine chisel:—

These capitals do not all fit the columns that carry them, which suggests that they were not wrought on the spot, but instead of that came, as some writers think, from Constantinople, where in the sixth century it is thought marble capitals were prepared and carved for export, and whence the workmen of Ravenna—able architects and constructors, and good mosaicists, but not such capable sculptors as the Greeks—probably obtained these capitals of Proconneso marble, unless indeed they got them from Salonica.

Our author's claim for the native artists that they were good mosaicists does not seem quite consistent with what he said a little before, but he is on firmer ground in tracing the idea of the octagon at S. Vitale with its Exedrae to Italian examples, such as the building known as "Minerva Medica," at Rome. He claims as the architect of S. Vitale Julianus Argentarius, who "was, in my opinion," he says, "an Italian artist who formed himself on the school of Ravenna." He cites Agnellus as his authority. But Agnellus, who wrote early in the ninth century, speaks of Julianus Argentarius, together with the Archbishop Ecclesius, as the founder rather than the architect of this and other churches at Ravenna: "B. Martyris Vitalis Basilica (*sic*) mandante Ecclesio viro

beatissimo Episcopo a fundamentis Julianus Argentarius ædificavit, ornavit, atque dedicavit . . . .”

Architects do not dedicate their buildings, and “Argentarius” is understood by the commentator on Agnellus to be an official title, and Julianus to have been the steward or treasurer of the see of Ravenna, to whose charge the archbishop committed the building of these churches.

In the same way Odo and his son Edward, goldsmiths to Henry III, who were once thought to be the architects of Westminster Abbey, are now recognised as the king’s treasurers and his commissioners for the financing of the building operations.

The truth seems to be that the arts of the two branches of the later Roman Empire acted and reacted on one another. In the Western Empire the basilican type, the *ναὸς δρομικός* of Porphyrogenitus, with its long-drawn-out colonnades and roof of wood, was the favourite form; and yet there are round churches and domed churches in plenty west of the Adriatic. And though the *ναὸς ἐλληματικός* or domed church was more characteristic of Eastern Rome, there still remains at least one basilican church at Constantinople of Constantine’s date, according to Fergusson.

For New Rome herself must have borrowed from the other capital. Constantinople was built in a hurry; architects were summoned from all parts of the world, and it is natural to suppose were drawn mainly from Italy. The dome itself, wherever it may have originated, had long been naturalised at Rome, and was to be found not only in the Pantheon and the Baths of Antonine, but in the mausoleum built by Constantine for his daughter, now known as the church of Sta. Costanza. The dome itself, therefore, may in the first instance have travelled from Italy to Byzantium, and established itself there to the exclusion of the other type. There would be nothing wonderful in its reappearance two hundred years later in the West, under Justinian.

Its treatment, however, at Ravenna is so different from that at Rome that one cannot but think there is more evidence of Byzantine influence on the design than Signor Rivoira seems to allow. At the same time he is no doubt right in thinking that the execution of the work is due to Italians. The general idea of the construction may have been given by an architect from New Rome, but the hands that carried it out were probably native to the soil. This combination of influences may often be traced where a new school of design first begins to make itself felt on an existing style. It may be traced in the earlier examples of the Renaissance of the fifteenth and sixteenth centuries. The monument of Henry VII

and his queen at Westminster is a well-known instance of this. The figures by Torrigiano might be on a monument at Florence; but the altar tomb on which they lie, though intended by him to be in his own Italian style, betrays in its execution the hands of the native workmen to whom he was obliged to entrust it. How could it have been otherwise? We are told that the builder of Longleat procured a design from Italy, but the building had to be carried out by English workmen, and for all its classic details it is purely English, and unlike anything by Palladio or Vignola. So, too, in the earlier styles of Norman and Gothic work in England. The great churches with which the Normans hastened to cover England after the Conquest were such as they had left behind them south of the Channel; but the mass of operatives must have been English, and the style soon diverged into something distinctively national. The apsidal ends, universal in the early Norman churches, gave way to the square end of the Saxons, which in its turn had been inherited from their Celtic forerunners. The traces of the old Roman art which in France survived into the Gothic period, and may be detected through a great part of its course, disappeared very soon in England where classic example was less abundant. And in spite of the enormous influence of the French Gothic work in the thirteenth century, which was conveyed across the Channel by the ecclesiastics and great potentates who alone were the travellers of those times, the native workmen soon put their own stamp on their work, and developed a native style which had little in common with French examples.

In Italian art the same thing occurred to justify the claims to originality which Signor Rivoira advances. And after the Lombard Conquest in 570 Byzantine influence naturally ceased; the new style went its own way and assumed the distinctive national character which we know as Lombard Romanesque. In some of their details, as for instance the fashion of enclosing figures of animals in square panels, Signor Rivoira traces a reminiscence of the old Etruscan art, which preceded that of Rome, coexisted for a long time with it, and to which there is good reason to think Roman art owed a much larger share of its peculiar character than has been generally admitted.

The Lombard style is familiar to every student of architecture, and need not be dwelt upon here, even did space permit. The basilican type continued or resumed its popularity, and the ingenuity of the builders was directed towards replacing the wooden roofs of the Ravennate architect by stone vaults, first applied, as in our own Peterborough



and Ely, to the aisles, and afterwards, as skill and audacity in construction advanced, extended to the nave and choir.

The latter part of our author's work and the whole of his second volume, which has lately been published, is devoted to tracing the influence of Italian Romanesque on Transalpine architecture. From the external arcaded galleries of the apses at Como, Pavia, and Lucca came those of Spires and Cologne, just as the influence of S. Vitale can be traced in Charlemagne's great church and tomb-house at Aquisgrana. In the same way the campanili of Sta Maria in Cosmedin, at Rome, and those like it at Milan and elsewhere, with their many-windowed storeys and their midwall shafts, gave the lead to similar constructions north of the Alps, especially in Germany. Their influence may be traced in our own country in the early campaniles of St. Michael's at Oxford, St. Benet at Cambridge, and the towers of Barton-on-Humber, Earls Barton, and St. Regulus at Aberdeen.

It is in Normandy and Burgundy that the Lombard influence first made its mark. The strange church of St. Benigne at Dijon was refounded by the Lombard Abbot Guglielmo da Volpiano, 1002-18, and built by the Italian workmen whom he imported. Capitals with the *pulvino* occur in the crypt of St. Laurent, Grenoble, which Signor Rivoira dates in the second half of the sixth century, and considers the oldest remaining church in France. From Dijon Guglielmo was invited to Normandy by Duke Richard II, and his pupil, Lanfranc of Pavia, carried the Lombard-Norman style into England.

Signor Rivoira traces very ingeniously to a Roman source a peculiar feature in the church of St. Pancras at Canterbury, which was dedicated by Augustine. The opening of the chancel from the nave was divided into three by two detached columns, and the same arrangement occurs in the remains of the church of S. Cesario al Palatino at Rome, a church with which Augustine must have been familiar. The same feature existed in the Saxon church at Reculver, which is now destroyed, and its two columns are set up in the Cathedral precincts at Canterbury. It is singular that there are two later examples of triple chancel arches in Kent, for which these early buildings possibly gave the suggestion: one in the thirteenth-century church at Westwell, and another dating from the fifteenth century in the little church of Capel-le-Fern, near Dover.

In Germany it is recorded that Bishop Rufus of Treves invited artificers from Italy to repair his cathedral in the sixth century; possibly among them were members of the mysterious guild of Magistri Comacini, of whom so little is known

with exactitude. Charlemagne not only imported for his great church at Aix "masters and artisans of every kind from all cis-marine lands," but actually caused "columns and marbles to be brought from Rome and Ravenna, since he could not get them from elsewhere." He had been at Ravenna in 787, and his design was based on that of S. Vitale. It was carried out, in Signor Rivoira's opinion, under Byzantine architects by Italian operatives assisted by Frank workmen. The interior of this great building is copied so exactly in the abbey of Essen, of which our author gives an illustration, that at the first glance one thinks the plate is mis-named. Essen, however, has only three sides of the octagon and the corresponding part of the cupola.

Signor Rivoira's two splendid volumes form a monument of patient and discriminating research, and they will always serve as a storehouse of information for all students of architectural history. That Italy is the mother of all the arts of modern Europe is of course indisputable, and it is abundantly interesting to trace the currents by which her influence flowed from its source into distant lands. But side by side with this it is not less interesting to see how national temperament and local conditions affected the art in each country and moulded it into distinct national styles; which, though they all bear traces of their parentage, in some cases strongly marked, and in others perhaps only faintly preserved, nevertheless fulfil the true function of a living art in reflecting the character and expressing the mind of the people and the age which produced it.

THOS. G. JACKSON, R.A.

### ROMAN SCULPTURE.

*Roman Sculpture, from Augustus to Constantine.* By Mrs. Arthur Strong, L.L.D. pp. xvi, 408. 130 Illustrations. 8 in. x 6 in. Price 10s. 6d. London: Duckworth & Co., 3, Henrietta Street, Covent Garden.

MRS. STRONG in "Roman Sculpture" has attempted and notably achieved two main objects: (1) to set forth, clearly and with a wealth of illustration, the history of a great period of sculpture, and (2) to establish its true place in the development of classical art. It has been too long the fashion to decry Roman sculpture, to fling at it the catchwords of "realism," "theatricality," and the like, and to regard it merely as a vulgar derivative of Hellenic sculpture.

If Mrs. Strong's book is read as widely and carefully as its erudition and sound critical standpoint deserve that it should be, the spirit of easy, and generally not very well informed, contempt is likely to be checked. So good a case has the defender of Roman sculpture that it would only have been human if Mrs. Strong had carried the war into the enemy's camp, and cast some doubts on the attitude of idolatry which so often obtains in reference to some Greek sculpture because

it is Greek rather than because it is beautiful in its own right. In a comparison of the dying lion on the Arch of Constantine with the metope of Olympia showing the Nemean lion dead at the feet of Herakles, we read:—"Comparisons of the two should enable us to apprehend more closely the peculiar character of each, without, it is hoped, causing us to praise either by detracting from the other."

We quote this as an example of the judicial tone which informs the author's criticism, a tone too often neglected by those who have a case to prove. We are also moved to admiration by the scrupulous care with which Mrs. Strong acknowledges the source of the many theories and discoveries by other workers in this field. It is to her that we already owe an English translation of Wickhoff, and the volume under review is furnished freely with apposite quotations from him, from Riegl's illuminating writings, and from Professor Petersen. It was for some time a cause of mocking that English criticism had lagged behind German learning in the study of Roman art, but the researches of Mr. Stuart Jones and Mr. A. J. B. Wace at Rome, the work of Mrs. Strong herself, and, not least, the labours of Mr. Haverfield in the field of Romano-British archaeology, have gone far to remove this reproach.

It is impossible to take our readers through the fifteen full chapters in which Mrs. Strong unfolds the development of Roman Sculpture during the four centuries from the Augustan Age to the Principate of Constantine. We can do no more than indicate slightly some of the ground covered and the argument which threads its way through the descriptions of the great Roman monuments. The main contention is that Roman art must be judged by its own rules, and that it is as useless as it is unfair to examine, for instance, the reliefs of the Trajan Column in the light of the Panathenaic procession of the frieze of the Parthenon, and to condemn them because they do not conform to the same standards. The claim for the sculpture of Rome is that it has a place not only definite but inevitable in the history of the art, and that it is the logical link between Greece and the Renaissance.

Not only is the architecture and decoration of Rome not decadent, but progressive "along the ascending line." While it would be idle to deny the preponderating weight of Greek influences in the art of Imperial Rome, it is equally foolish to refuse to see its national character, and to begrudge it the invention of optical and spatial effects which are altogether absent from the work of classic Greece and represent a step forward in artistic achievement.

As Mrs. Strong very appositely says, "Wren's St. Paul's is not any the less a powerful original creation because the

domed church is not a type native to England, but is borrowed from abroad," and again, "If Hellas and the East itself continued artistically active it was owing to the inspiring forces of Roman subjects and ideas. For Rome, by proposing new subjects to Hellenistic art, gave it new life and new chances of development at a time when it had lost its old significance."

That Rome should have absorbed Greek art and invested it with a new vitality is proof enough that the soil was rich and ready to receive it, and it is hardly credible that the Hellenistic forms should have developed on lines so markedly Roman and national, unless the spirit of the old art of Rome and of the Peninsula (of which so few traces survived the Hellenistic wave) had still retained some of its force.

In a book where so many lines of criticism are followed and so many aspects of sculpture are set out, it is difficult to choose any for extended mention. Very impressive, however, is the skill with which Mrs. Strong sets out the development of backgrounds and compares the tactile quality of Greek relief with the illusionist quality of so much of the Roman work. Again, in the *Ara Pacis Augustae* the relief takes on a suggestion of atmosphere which is altogether unknown to Greek art.

A happy relationship with literature is established by the description of "narrative style" given to the "continuous" treatment of the reliefs which creep up the Column of Trajan. It is the prose epic in stone.

Very luminous is Mrs. Strong's criticism when she deals with the shadow of things to come in Christian art, a shadow cast by the constant recurrence of the Emperor in the "continuous" reliefs. "As we follow Trajan's figure in panel after panel . . . we feel that it is only a thin wall that divides the plastic representation of the *res gestae*, the *Acta* of the Emperor, from the Acts of Christ and of the Saints . . . the Emperor, the Man-god, must become the precursor in Art of the God made Man." And again in the Aurelian Column the *Jupiter Pluvius* has lost the serene dignity of the traditional Olympian type and "bears in his melancholy riddled countenance some touch of 'the Man of sorrows.'"

The chapter on Roman portraiture is admirable and well illustrated. We could have wished that a photograph of the *Agrippina* head in the British Museum had been included, but it were churlish to grumble where the publishers have been so lavish.

Altogether there are few books which it falls to a reviewer's lot to read, which can be so wholly recommended as authoritative and valuable as "Roman Sculpture," and students of art are in lasting debt to its brilliant authoress.



ROMAN GENERAL SACRIFICING. FRIEZE FROM THE ALTAR OF DOMITIUS AHENOBARBUS 35-32 B.C

From "Roman Sculpture" By permission of Messrs. Duckworth & Co



# The North British and Mercantile Insurance Company's Building, Edinburgh.

J. M. Dick-Peddie, Architect.



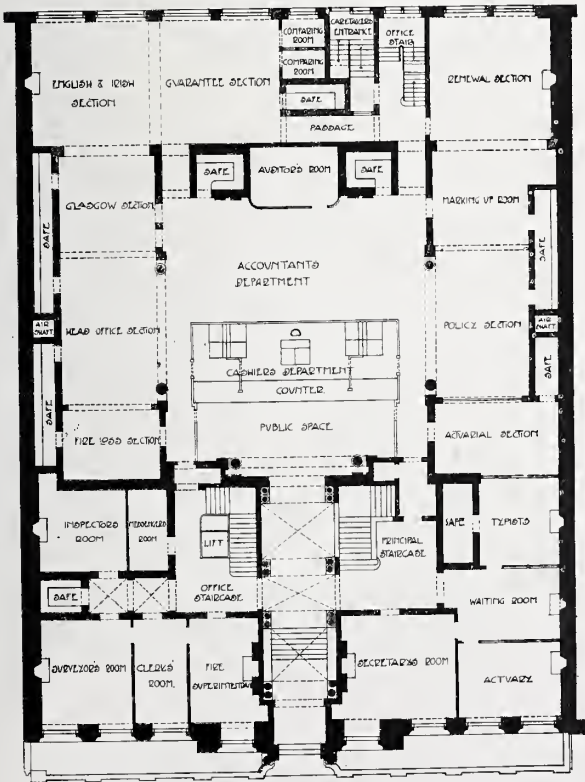
HIS building is in Princes Street, Edinburgh, the right-hand half being on the site of the original office of the company. The building had to be designed in such a way as to allow of a part being built and occupied by the company before the old buildings which they continued to occupy could be removed for the construction of the remaining section. The work was begun in July 1903, and the first part was completed and occupied by January 1905, after which the construction of the second section was begun.

The company has a great accumulation of papers and books which have to be preserved, and it was essential to provide a large and well-lighted

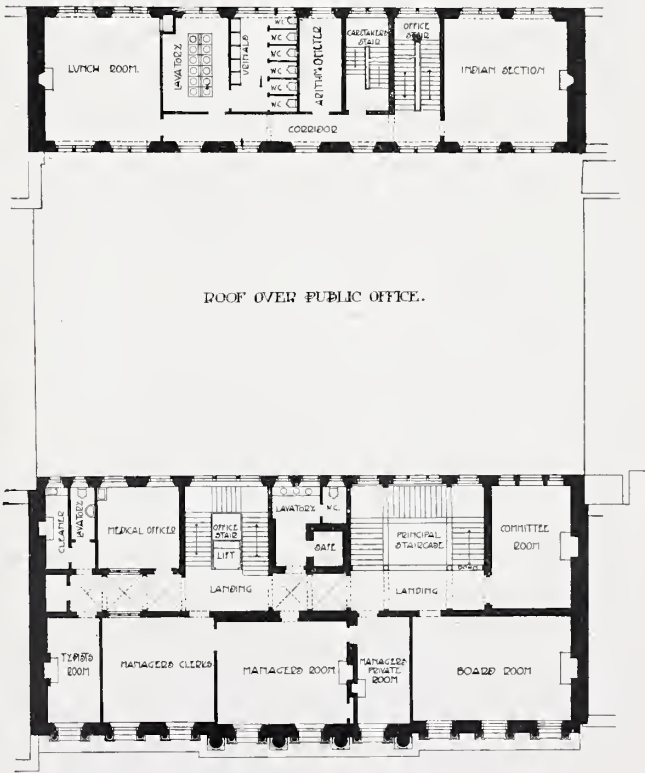
basement. With this in view it was decided to form an area between the building and the street, and the piers between the basement were built of steel to allow of the windows being as large as possible. The basement windows are glazed with "Luxfer" glass in copper frames, with such satisfactory results that on a bright day print can be read at a distance of about 100 ft. from the front wall. The basement walls are lined with white tiles. The area has a balustrade of red unpolished granite, 5 ft. high.

The façade is built of Blackpasture polished stone, and all the walls and partitions are built with Portland cement mortar.

The floors are all of reinforced concrete, and excepting in the public office and corridors are finished with ordinary flooring-boards on shallow joists. This method of construction has great



STREET FIRST PLAN.



FIRST FLOOR PLAN.







*Photo: Bedford Lemere & Co.*





*Photo: Bedford Lemere & Co.*





*Photo: Bedford Lemere & Co.*



advantages in allowing space for the passage of electric-light tubes, &c., which are otherwise difficult to dispose of.

The ground-floor corridors and the space for the public in the public office are covered with black and white rubber in sheets about  $\frac{3}{8}$  in. thick. The remaining part of the public office is laid with thick cork cloth directly on the concrete. This floor is practically noiseless, and at the same time can be easily kept clean.

In the well of the office there is an Otis elevator and a small book lift affording ready communication between the various departments.

The entrance hall and main staircase walls are lined with marble. The columns are of white marble, and the wall panelling of Irish green with white and red lines defining the panels. The columns of the main office are also of white marble.

The whole of the woodwork of the main stair-

case, secretary's room, and board-room is of waxed oak slightly stained. The public office fittings and panelling are in dull polished mahogany.

The roof of the public office is of steel and concrete glazed with patent glazing and wire-woven glass. The ceiling light over the public offices is 32 ft. square, and is formed with steel ribs and cast-iron astragals.

There is a large fan in the space between the false light and the steel roof, by which the air is withdrawn from the public office, the air supply being from down-cast shafts led to the basement, and it passes through the floor to radiators so that in winter a constant supply of fresh warm air is provided.

The building is heated with hot water, and there is an elaborate installation of electric lighting, telephones, and Lamson tubes, providing intercommunication between the various departments.

## THE NORTH BRITISH AND MERCANTILE INSURANCE COMPANY'S NEW HEAD OFFICE BUILDING, EDINBURGH.

J. M. DICK-PEDDIE, Architect.

THOMAS YOUNG, Clerk of the Works.

### LIST OF THE CONTRACTORS.

G. & R. COUSIN, EDINBURGH.—Mason Work.

JOHN LOWNIE & SON, EDINBURGH.—Carpenter and Joiner Work.

A. MATHER & SON, EDINBURGH.—Iron and Steel Work.

HUGH WEIR, EDINBURGH.—Plumber Work.

STUART'S GRANOLITHIC CO., LTD.—Plaster-work and Fireproof Floors.

JOHN LOW & SON, EDINBURGH.—Slater Work.

LINDSAY & CO., EDINBURGH.—Glazier Work.

GEORGE DOBIE & SON, EDINBURGH.—Painter Work.

JOSEPH HAYES, EDINBURGH.—Stone Carving, Modelling, &c.

GALBRAITH & WINTON, GLASGOW.—Marble Work.

FIELD & ALLAN, EDINBURGH.—Tile Work.

THE OTIS ELEVATOR CO.—Elevators, Lifts, &c.

JOHN ROBERTSON, GLASGOW.—Lift Enclosure, Entrance Gate.

CHANCELLOR & PETERKIN, EDINBURGH.—Electric Lighting.

J. W. SINGER & SONS, and OSLER & CO.—Electric Fittings.

THE NATIONAL TELEPHONE CO., LTD.—Telephones.

THE NORTH BRITISH RUBBER CO., EDINBURGH.—Rubber Tiling.

HENRY HOPE & SONS, BIRMINGHAM.—Iron Casements.

THE VAN KANNEL REVOLVING DOOR CO., LONDON.—Van Kannel Door.

CHATWOOD & MESSRS. MILNER'S SAFE CO.—Safe Doors.

W. H. LONSDALE, LONDON.—Stained-glass Window on Staircase.

WALTER MACFARLANE & CO., GLASGOW.—Cast-iron Frames for Ceiling Lights over Public Office.

JOHN LOWNIE & SON, EDINBURGH; J. & T. SCOTT, EDINBURGH; and JOHN TAYLOR & SON, EDINBURGH.—Internal Wood Finishings, Chimneypieces, Panelling, Desks, Counters, &c.

JAMES GRAY & SON, EDINBURGH; SMITH & WELLSTOOD, EDINBURGH; FRASER, WALKER & CO., EDINBURGH; and CALLAM & CO., EDINBURGH.—Grates.

CHARLES JENNER & CO., EDINBURGH.—Cork Flooring.

THE LAMSON PNEUMATIC TUBE CO., LONDON.—Pneumatic Tubes.

MACKENZIE & MONCUR, LTD., EDINBURGH.—Heating.

CHANCELLOR & PETERKIN, EDINBURGH.—Electrical Heating.

JOHN BRYDEN & SONS, EDINBURGH.—Blinds.



*Photo: Bedford Lemere & Co.*





*Photo: Bedford Lemere & Co.*



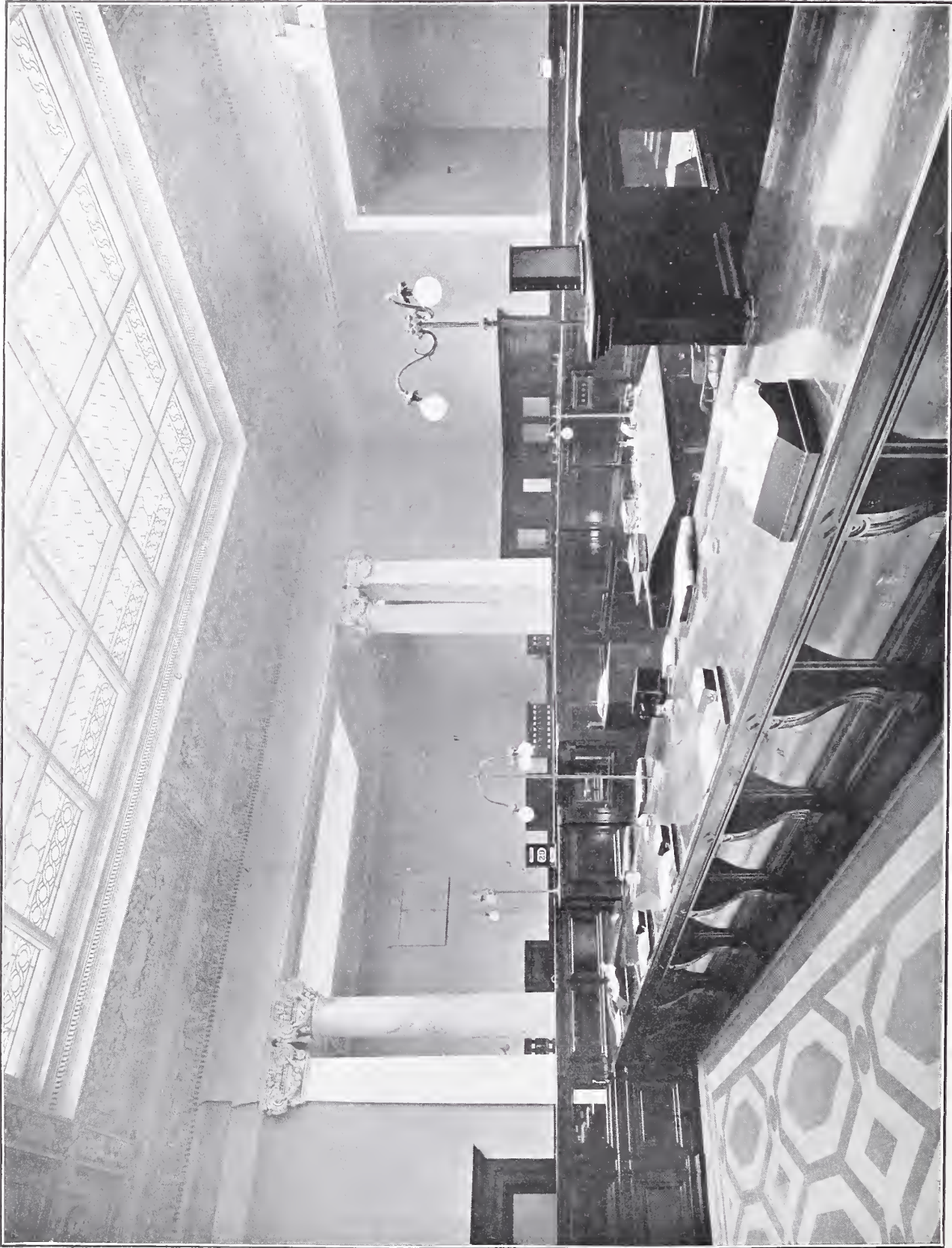


Photo: Bedford Lemere & Co.

THE GENERAL OFFICE.





Photo: Bedford Leneve & Co

THE BOARD-ROOM.





*Photo: Bedford Lemere & Co.*



# Here and There.

## ST. MARK'S, VENICE—A DISCOVERY.



QUITE by accident an interesting discovery was made in the floor of St. Mark's last year.

The mosaic pavement had become so uneven in the centre of the church, that it was necessary to remove some of the old marble mosaic, and to relay it. The taking up of a part of the pavement disclosed a well-built wall, and Professor Manfredi, the supervising architect, found, upon a close investigation, that this wall was part of a structure or crypt on which the present church was built, and about which nothing was known. Professor Manfredi made further researches, and more of the old pavement was uncovered, when three sides of the crypt came to light, the walls being built with different materials, mostly of brick. In one or two places were remains of very primitive decorations in fresco. At a depth of 1·35 metres below the pavement of the church was discovered a large block of Istrian stone, on which is very roughly sculptured a Byzantine cross. This was found to be a tomb, the Istrian stone block forming the top of it. This tomb lay with its back to the wall of the crypt towards the entrance of St. Mark's, while the principal and exposed side of it faced the high altar, and had some bas-relief upon it. The tomb lay across the church, with the head to the right, and it was presumed to date from 800 to 900 after Christ. The crypt itself was not very much wider than the length of the tomb. It was also supposed that the tomb was of some

notable individual, it being the only one yet discovered under the pavement of St. Mark's, and the place where it was found is said to be close to the place where Saint Mark, the venerated patron saint of Venice, was buried. From the burned bricks in the walls, and remains of burned wood, this crypt appears to be part of the primitive church of St. Mark, which was destroyed in 976 by fire. After the fire the tomb was buried entirely and forgotten, and a new church built on the site. Towards the roof the walls of the crypt end in the form of arches, which are believed to have been covered with a wooden ceiling or roof.

The Committee of Survey of the Monuments of Venice inspected the place, and authorised Professor Manfredi to make further investigations, to disclose the tomb entirely, and to open it.

The work of enlarging the opening and the excavation of the sarcophagus was attended with difficulty owing to the presence of water. A large section of the beautiful old pavement about two and a half metres (eight feet) square was carefully removed, and the stone coffin lifted by means of ropes and pulleys attached to the big cupola of the church just over the excavation. The coffin measured about six feet in length (1·91 metres) and two and a half in height (67 centimetres). The coffin proper is of one solid block of hard Istrian stone, called Obrioni Minerì. The lid, which is cracked entirely across, is of a softer stone, called Gallina or Carnizza. Quarries of this stone do not now exist. On the top of the lid is a raised Byzantine cross, apparently of eighth-century design. The ornamentation of the coffin is very simple; at either end of the front-side is a bas-relief in Romanesque pattern of the



INTERIOR OF ST. MARK'S, VENICE. THE CROSS SHOWS THE SPOT UNDER WHICH THE CRYPT AND SARCOPHAGUS WERE DISCOVERED.



fourth or fifth century. Across the middle are remains of two lines of inscription which has been chipped off. From this it appears that the coffin proper is of older date than the lid, and no doubt the inscription was obliterated in the eighth century, when the lid appears to have been made and the coffin was put into the crypt. The sarcophagus must have been in a fire, as the stone shows traces of smoky discoloration here and there.

There are many suppositions as to the history of the crypt. Before St. Mark's was built, an orchard of the convent of San Zaccaria covered the spot, and the crypt may have been part of a chapel of this orchard. When St. Mark's was built this crypt may have been covered over. Then, again, it may have been a part of the primitive church of St. Mark which was destroyed by the fire (Pietro Candiano, 976), and in rebuilding the church the crypt may have been covered over. If this supposition is true, it is difficult to understand why the reconstruction of St. Mark's is not mentioned in history. Diacono Giovanni, a chronicler of Venetian history, wrote in 976 that the Doge Orseolo first *repaired* the church. If Orseolo had *rebuilt* the whole of St. Mark's, which would have been necessary, as the floor was raised over six feet, the work itself would have been of such importance that it would surely have found a mention in the writings of Diacono Giovanni.

It is an historical fact that the building of the church of St. Mark was begun in 829, just after the body of Saint Mark was brought to Venice. History tells us of the great fire in 976 that destroyed a part of the Doge's Palace, St. Mark's, and over 300 houses. It is very probable that this crypt was covered at that time. At any rate enough has been revealed to make it possible that the discovery will lead to more knowledge of the veiled history of the origin of St. Mark's.

Beautiful pavement mosaic was brought up from the crypt which must have belonged to a structure of great importance; remains of fresco decorations were found that probably decorated the walls and vaults. The other features of the discovery are:—The Byzantine cross on the lid of the tomb; the remains of a little glass lamp found on the top of the coffin; the position of the coffin, which in ancient times was always placed facing the rising sun; and the vaulted roof,

always built by Christians in the eighth century over the tombs of eminent persons.

It was generally believed that nothing would be found in the tomb, as it must have been buried over a thousand years, and was partly immersed in water; but when one half of the broken cover was removed, two human skulls were revealed, and a lot of human bones under clear water. When the whole of the top had been removed two more skulls were seen. These bones were resting under water on a layer of soft ashlike substance. It is possible that they are bones of Doges or saints, or those of some important family.

The ashy mud at the bottom of the coffin was not disturbed pending a close examination which took place a few days later. Unfortunately the search did not reveal the existence of any coins or jewellery, or anything which could give a clue to the identity of the remains, or the date at which they were interred. The history of the crypt and of the sarcophagus remains, therefore, a mystery, and a matter of speculation.

L. BÖHM DE SAUVANNE.

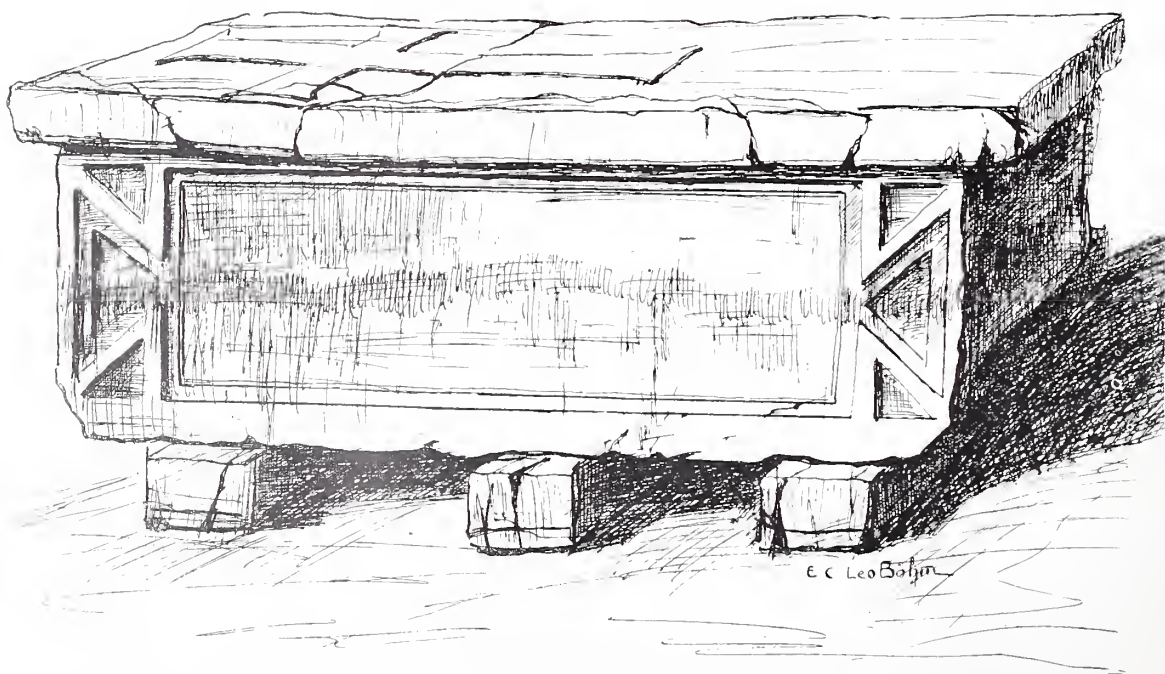
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#### URBAN AND SUBURBAN PLANNING.

*A Paper read at the City Beautiful Conference, Town Hall, Liverpool, Thursday, June 27.*



It is still a somewhat new idea in England that a city can consciously assume a beautiful shape, though this Conference is a good witness to the strength of the idea now that it has been born among us. In England we have too long looked for beauty in towns as a kind of accidental by-product, brought about by the fortuitous combination of age and situation. Given a new manufacturing town in the centre of a flat expanse of country, we at once imagine it of necessity some hideous thing to be shunned by all except those unhappy ones who are compelled to spend a portion of their lives within its gates. As towns are usually constituted by sheer haphazard, the feeling is a very natural one. Yet such a



SKETCH OF THE STONE SARCOPHAGUS FOUND IN A CRYPT UNDER THE NAVE OF ST. MARK'S, VENICE.



town presents the easiest problems in symmetrical and monumental planning—the type of planning suited to a plain.

There seem to me to be two chief reasons to account for the fact that in this matter we in the nineteenth century fell so far behind our continental neighbours. The first, which is still with us and may be always so, is the Englishman's desire to get rich quickly and shut himself up in his own castle, careless of the community which has helped him to achieve his ends. The second, which is slowly disappearing, was that every cultured person in the latter part of the last century suffered from a surfeit of the picturesque. The Gothic revival in architecture, the romantic spirit in literature, the teaching of Mr. Ruskin and the works of the Pre-Raphaelites all led in this direction and did infinite harm to the dignity of our towns. I suppose since the beginning of the last century no square or circus or other symmetrical *place* of any importance has been laid out in any English town, and yet it is only with the use of such forms that the finest architectural effects are possible. It must not be imagined from this that there is no scope for the picturesque or romantic in civic architecture. The very supposition is absurd. The real fact is that the picturesque is properly inherent in the site and cannot be artificially brought about. It would, for instance, be impossible for Edinburgh with its rock to be anything but picturesque. But on a plain the right treatment of plan is a broad symmetrical balancing of effects, the type of plan which is in essence monumental and classical. This was the kind of plan Sir Christopher Wren first suggested in England after the great fire of London, of which the best English example is the city of Bath, laid out in the eighteenth century by the Woods, father and son, the architects of the building we are occupying at the present moment. In the nineteenth century Paris is the obvious instance.

If, then, it is conceded that this is the spirit in which we should plan the level and principal portions of the town, it follows as a necessary corollary that the planning of such new parts or the alterations of existing parts must be consciously directed towards some definite scenic effect. The direction of the main thoroughfares can no longer be dictated by that of the primitive sheep track. It means further that in these portions of the town the scope of the individual builder must be limited for the public good. In the picturesque portions the reverse is the case. Here the very individuality of the buildings enhances the picturesqueness. We all know the charm and romance conveyed by the varying outline of roof upon roof as buildings climb a hill. To prohibit variety of form and colour would here be to lessen the beauty of the town, not to increase it.

In the last century in England we carried our individualism through our towns from end to end, respecting neither our neighbours nor the general good. It was possible less than ten years ago for Nash's fine architectural scheme in Regent Street to be broken up by two odd and ugly domes erected to advertise certain shops. It is still possible in Liverpool to introduce a yellow terra-cotta-dressed building into the quiet dignity and repose of Rodney Street, for it has unfortunately been done. Castle Street, too, which had the makings of one of the finest streets in England, though in our happy-go-lucky way it just manages to miss being centred on the domes of the Custom House and the Town Hall, has never maintained the example of dignity and stateliness set by these two buildings and by Cockerell's Bank of England. Good as the street is by its width and position, how much better it might have been were the buildings on either side of one height and one material, not to mention the more debatable point of one style!

While, however, this riot of individual fancy and individual advertisement was playing havoc with our modern English

towns, France was laying out not only in Paris but in all her provincial centres broad streets and boulevards on architecturally conceived lines. By this I mean streets which had some architectural relation to one another, being either focussed at some important centre or having their vista closed by some monumental building. This broadness of effect was certainly obtained in the majority of cases at some sacrifice of the picturesque, but sufficient old and irregular streets remain in Paris round Notre Dame or give varied outline to the Montmartre Hill to even enhance by contrast the grandeur of the great boulevards.

The lesson for us is that this could only be consciously brought about by strict building regulations which took into consideration other things beyond hygiene and the public safety. To increase the beauty of the town was the patriotic duty of the municipality, and the rights of individuals were curtailed for this end. French and lately American towns have in fact lived a conscious regulated life, while our towns, as towns, have in this respect slept. The result of this foresight, as of all foresight in such matters, has not only been an increase in dignity and beauty, but—if Paris may be taken as typical—an increase in material prosperity as well.

It may be useful, then, to state in general terms the way in which these results have been brought about and to see if the same methods could not be adopted here.

The first main distinction between Parisian methods and ours is that in Paris all schemes involving in any way the beauty of the town, whether they be for the laying out of new streets, the drafting of new building regulations, or merely the decoration of some public building, are reported on by specially appointed commissions of experts assisted by the permanent officials. It has become an honour for any artist, whether he be an architect or painter or a sculptor, to serve on these commissions and give freely and without remuneration the best of his ability to the public service. For instance, the Paris building laws were revised in 1896 on the report of a commission which consisted of the following persons: two municipal councillors, the official who corresponds to our building surveyor, the chief of the department which deals with building lines, the chief engineer, the chief inspector and the honorary architect to the town of Paris—that is, seven official personages. So far it might have been an English departmental committee. But here is the difference: in Paris sixteen other outside architects of distinction were added so as to ensure to the town the best ability, which is not generally willing to submit itself to the trammels of an official position. Such a commission, it will be at once seen, would possess enormous weight. It dared to legislate on many other matters beyond those affecting the health and safety of the public. It imposed a large number of restrictions on buildings which we have not arrived at in England, but it did them with knowledge of the effect to be produced. To take an apparently small matter, but one which has been large in the result. As in Edinburgh and London, though not yet in Liverpool except for domestic buildings, the limiting height of all buildings in Paris is proportioned to the width of the street, but in addition to that the roof is to be contained within a quadrant of a circle of given radius. The result of this simple regulation has been to bring about a striking uniformity of roofs, which is most important to the regular and monumental appearance of a street, for in a wide thoroughfare it is the masses of roof seen against the sky which are the dominating features of the façades. The Avenue de l'Opéra and Rue de Rivoli are good examples of this. Another by-law, more strictly dealing with projections over the public way, has led to the flatter and quieter treatment of town fronts which is so characteristic of a French town. But, granting the existence of such a commission as I have related above, it is possible for the municipality to exercise a much greater control over

buildings than it exercises already, and to definitely prohibit buildings of bad design, as well as to encourage good ones.

In Edinburgh, where the Guild Court, which is largely composed of architects, controls all building operations, the designs for the exterior of buildings about to be erected have to be submitted for approval together with a statement of the materials to be used. Edinburgh can thus control the appearance of its streets in a way neither Liverpool nor indeed any other English town can. But Brussels and Paris go much further than this. When a new street is to be opened up they offer definite encouragements to good building by awarding prizes for best designs for buildings about to be erected in it. Paris even not only gives a prize to the architect, but gives a remission of part of the street tax, that is of the rates, to the owner of the building. No such direct encouragement to build beautifully has ever been proposed, as far as I am aware, in England, nor would it be much use unless we accepted the system of trusting the awards to juries of experts. In England the building by-laws are drawn up and administered by lay bodies, assisted by officials, who in most cases make no claim to be architects or to have had an education in the fine arts.

But if this question of expert advice is necessary in dealing with the details of buildings, how much more necessary does it become when a big improvement scheme is projected! For consider what the cutting of a single new street in a town involves, in addition to the sewerage, the lighting and paving, for which the borough engineers and surveyors are the proper authorities. The intersections the new street makes with every cross street mean important building sites, and the shapes of these sites determine for ever the shapes of the buildings to be put upon them. Are they good shapes, conducive to beautifully-shaped buildings? For it is not a sound canon of architectural criticism to say of buildings, as was once humorously said of the University Buildings in Liverpool, that we greatly admire them, but much dislike their shape. The ground plan of a building is its most important factor. Will the sites provided make balanced, symmetrical, dignified buildings? These are all questions, I submit, of a purely architectural character, and the City Beautiful of the future depends for its existence on the solutions arrived at, and as such they are as important as those problems of traffic and sewerage which have till now completely held the field.

We are having at this very moment in Liverpool a striking example of the simple disaster which follows the neglect of these questions. The famous George's Dock sites are, it will be admitted, among the most important in the town. They stand at its very gates, and a worthy treatment of them should have the town's first care. Yet the shape and size of these three sites have been determined solely by the carrying through to the river front of Water Street and Brunswick Street, regardless of the fact that the sites so left are of most unequal size and shape. This being so we are beginning too late to realise that we can never have a balanced composition of the three buildings such as the position demands, and it is consequently rather useless now to complain of one building being higher than the rest. Again, there being in existence no architectural scheme for the whole, we find the Dock Board on one of the *end* sites putting up a building with a very dominant dome led up to by lesser ones, which is essentially the type of building to form the centre of a composition, not one of the wings. I do not know in this case what difficulties, if any, there were in the way of laying out these sites in an architectural manner—if, for instance, it were necessary for Brunswick Street and Water Street to be taken through, why the buildings on the river front could not have been carried over them on arches or by a colonnade; but, whatever the difficulties, I feel in France a proper solution

would have been obtained even at the cost of a short Act of Parliament. The best architecture can now never make a success of these sites, though beautiful material and good detail may alleviate the disaster.

In London we have recently had an example of the opposite method of dealing with town property—the French method, if I may call it so, though it was the English method too from the time of Wren till the end of the eighteenth century. The Crown, in dealing with its Piccadilly and Regent Street property, has formed just such an advisory committee of artists as is commissioned in Paris. Two leading independent architects, Sir Aston Webb and Mr. Belcher, were asked to form a committee to join Sir John Taylor, the official architect, in advising the Crown. The result has been that after a century of individualism we are to have once again a complete scheme of harmonious architecture from one end of Regent Street to the other.

Perhaps enough has been said for the establishment of advisory committees of artists. When once established, and if the municipality at its back is endowed with sufficient power, everything becomes possible. To begin with, an ideal plan of the city—ideal only in the sense that it is waiting to be realised—such as Washington and Boston already possess, should be drawn up, towards the ultimate realisation of which all improvements should lead. If Wren's for London after the great fire had been adopted, how many expensive latter-day improvements would have been forestalled! As in Berlin, certain districts could be set apart for certain purposes. The development being no longer haphazard, the character and consequent value of districts could be maintained. Just as much or just as little variety as the district requires could be allowed to buildings; and not only buildings and streets, but whole districts could be made parts of one harmonious composition. But the possibilities are endless. The one thing necessary for a city, as for an individual, is to have faith, and all else is added to it.

C. H. REILLY.

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#### THE CATHEDRAL BUILDERS.



AS nearly as we can make out, the cathedral-promoters are carried away by a sort of *post hoc propter hoc* belief, in a very mistaken fashion. In their desire to stem the current of modern materialism and irreligion, they seem suddenly to have turned their eyes to the cathedrals of the old world and then imagined that they recognised in them not an effect, but a cause: they seem to have understood that it was because cathedrals existed that people were fervent of faith, not that through and because of the existence of an abiding and abounding faith the men of those times were able to create those impressive monuments. Although such reasoning surely is inverted, we all may hope that a satisfying, if not far-reaching, reformation may attend their efforts. Meanwhile it must be conceded that as a part of the municipal scenery, as one of the items of a community's wealth, as a landmark along the pathway of art, a cathedral building may be fairly held to be worth its cost, whether in fourteenth-century guise it seems to ape the work of the men who created the style, or whether, like the Westminster Cathedral, it seems to explain more clearly the humanities of the day that gives it birth. Even then, some will be found pondering the question, is the modern cathedral really erected to the glory of God, or of the bishop, or of the architect?—*American Architect*.



THE ARCHITECTURAL  
REVIEW, SEPTEMBER,  
1907, VOLUME XXII  
NO. 130.



*Photo: Arch. Review Photo. Bureau.*

THE UNITED KINGDOM PROVIDENT INSTITUTION, STRAND, LONDON.

DETAIL OF THE PRINCIPAL ENTRANCE.

HENRY T. HARE, ARCHITECT. (*See p. 125.*)

The figures over the entrance represent "Temperance" and "Prudence," and are the work of Mr. H. Poole. The grilles and sliding gates are of bronze, and the door is faced with bronze. The name-plates on either side of the entrance are of bronze, enriched with colour and gilding.



# Report on The Condition of St. Paul's Cathedral by the Committee Appointed by the Dean and Chapter.

*August, 1907.*

TO THE VERY REVEREND THE DEAN AND TO THE CHAPTER OF  
ST. PAUL'S CATHEDRAL.

GENTLEMEN,

In compliance with your instructions contained in a document, dated December 6th, 1906, appointing us a Committee to "examine and report upon

- "(1) The stability of the whole structure of the Cathedral ;
- "(2) The extent to which the stability has been or is likely to be affected by any alterations or disturbances in the foundations of the Cathedral, or in the soil in its neighbourhood ;
- "(3) The measures which ought to be taken to remedy such defects or guard against such dangers as may be discovered ;"

we have now the honour to place before you the following report.

In the first instance we thought it expedient to address to you an interim report dealing with the question of the route of the London County Council sewer, which, as originally proposed, would have been within 45 ft. of the south-west tower of the Cathedral. We were gratified to learn that this report was adopted by you, and to find that the London County Council, after due consideration, had agreed upon another route. By this decision, we are of opinion that great danger to the Cathedral has been averted.

During the course of our inquiries we have had access to various documents containing much matter of interest of which we have been glad to avail ourselves. We gather from these and from

other sources that the nature of the subsoil, on which the present Cathedral is built, was from the first a matter of the gravest concern, and that Sir Christopher Wren was much impressed by the seriousness of the problem of obtaining suitable foundations for his church.

Wren could never have had any thought of preserving and making use of the old foundations. The alteration of the axis of the Cathedral and the departure from the mediæval plan necessarily meant entirely new foundations.<sup>1</sup> He expressly states that "he feared the old and new would not stand together without cracks." His first care, therefore, was to ascertain exactly the nature of the subsoil, which he proceeded to do in a very practical and exhaustive manner.

He sank wells at different points about the site to test the soil.<sup>2</sup> In this way he found the hard pot-earth "to be on the north side of the churchyard about 6 ft. thick and more, but thinner and thinner toward the south until upon the declining of the hill scarce 4 ft."<sup>3</sup> Still he searched lower, and found nothing but dry sand mixed sometimes unequally but loose, so that it would run through the fingers." He went on till he came to water and sand, mixed with what he took to be sea shells, but which later expert opinion has pronounced to be fresh-water univalves. Below this he came to "hard beach," and under that to the natural hard clay which lies under "the city and country and Thames also far and wide."

Wren found that the flow of water through the gravel stratum tended towards the river,<sup>4</sup> and that probably there had been no divergence or

<sup>1</sup> See Appendix I.

<sup>2</sup> "Parentalia," p. 285.

<sup>3</sup> A comparison of these figures with those of Appendix II. will show a considerable difference in the layer of pot-earth at the present time.

<sup>4</sup> According to our observations, the trend of the water is more in the direction of Ludgate Hill.

interruption of this flow for centuries, and it was certainly reasonable to suppose that these conditions would be maintained. History shows, however, that these anticipations were not fulfilled.

These researches led Wren to the conclusion that the subsoil which had been sufficient to support the old church might very well be sufficient to support the new one. The alternative was to pierce the six feet of pot-earth and carry down his foundations through the loose gravel and water on to the blue clay; this would have meant a depth of foundations about thirty-seven feet below the level of the street.

We quote the following from "Parentalia" as to the foundations for the new fabric, which were begun in 1674.

"He began laying the foundation from the west end, and had proceeded successfully through the Dome to the East end. But at the North-east corner he came upon a pit whence all the pot earth was gone . . . Rejecting the proposal to pile, he dug down to the hard beach above the London clay, and on it built a solid pier of masonry 16 ft. square, carrying this up to within 15 ft. of the ground where he turned an arch to join the other foundations." It is, perhaps, noteworthy that this north-east corner of the north aisle of the crypt is at present slightly the highest point in the crypt floor: this indicates that the compression on the two natures of subsoil was unequal.

In the carrying out of the work "the greatest care and industry was used, so that by the beginning of April anno 1685 the walls of the quire with the side isles thereto containing one hundred and seventy feet and in breadth one hundred twenty foot, with the great arched vaults underneath, were finished. As also two stately porticoes North and South opposite to each other and the huge and massive pillars of the Dome (which is one hundred and eight foot in diameter within the walls) brought to the same height, the work being totally wrought of large Portland stone."<sup>5</sup>

The west end of the old church was not entirely taken down until 1686.

Contracts for timber for covering the aisles of the new choir were signed in June 1688, but it was not until December 2nd, 1697, that the choir was formally dedicated, the occasion being the thanksgiving for the Peace of Ryswick. The morning-prayer chapel, the present St. Dunstan's chapel, was completed in 1698-9, which would seem to imply that the work at the west end was then nearly finished. The topmost stone of the dome was laid in 1710, the date usually taken as marking the completion of the building, though

much work was still going on within and without, and much was left undone.

But before this date, in December 1709, an entry in the Cathedral pay-book records "work done in repairing flaws occasioned by ye pressure, making good such stones as could be left remaining with lead and plaister being the eight Leggs of the Dome and in the inside of the East, W., N., and South cross being above 1,500 foot in periphery." This repairing continues in the two months following. Similar entries are found during the first six months of 1716, where one of the legs of the dome is mentioned as having been repaired with "42 tun of Portland stone," and again in 1722, when repairs to the south-east leg of the Dome are specified. One of Wren's original drawings in the Cathedral Library is a quarter plan of the dome area on which the great south-east pier is noted as "the peer which has been repaired,"<sup>6</sup> and the work was done by Edward Strong, who succeeded his father and uncle as Clerk of Works. From Clutterbuck's "History of Hertfordshire" we learn of Edward Strong that he "also repaired all the blemishes and fractures in the several legs and arches of the Dome, occasioned by the great weight of the said Dome pressing upon the foundations; the earth under the same being of an unequal temper, the loamy part thereof gave more way to the great weights than that which was gravel, so that the south-west quarter of the Dome and the six smaller legs of the other quarter of the Dome, having less superficies, sunk into the thinner part of the loamy ground, an inch in some places, in others two inches, and in other places something more; and the other quarters of the Dome being on the thicker part of the loamy ground and gravel, it did not give so much way to the great weight as the other did, which occasioned the fractures and blemishes in the several arches and legs of the Dome."

From these extracts it will be seen that before the completion of the building a settlement of the dome piers, especially those on the south side, had begun, the extent and direction of which may be seen in the diagrams and plans specially prepared for our report, and from the reports of the former Surveyor of the Fabric, Mr. Somers Clarke. From his annual report, dated October 1902, we quote the following:—

"That which to the eye of the spectator below looks like a colonnade surrounding the drum of the dome, is in fact a series of buttresses radiating from the centre of the circle, and resisting the thrusts of the dome and the cone. The outer ends of the buttresses are fashioned to resemble columns.

<sup>5</sup> Ellis's Edition of Dugdale, page 140.

<sup>6</sup> See Appendix III.



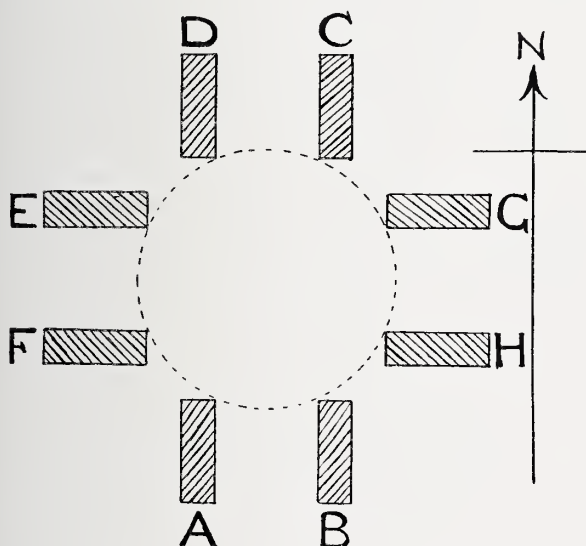
Each buttress is pierced by an arched opening, and over this is an eye or round hole pierced through the buttress.

"The settlement that occurred long since, by which the mass of the dome has sunk vertically some  $4\frac{1}{2}$  in. downward, has cracked through all these buttresses, some more, some less. The drum of the dome in descending has left the colonnade behind. . . .

#### THE ENDS OF THE NORTH AND SOUTH TRANSEPTS.

"Very considerable movements have taken place in the end walls of these transepts. The south transept has suffered most, and I will first call attention to it. As has been stated in previous reports, the sinking of the piers on which rests the vast mass of the dome has completely cracked through the arches, window heads, and generally the whole of the walls of the east and west sides of the transept.<sup>7</sup>

"How great some of the dislocation has been will be well understood on examining the diagram with the figures I subjoin.



The pier A	has descended bodily	$6\frac{1}{8}$ in.
„ „ B	„ „	„ $4\frac{5}{8}$ in.
„ „ C	„ „	„ $3\frac{1}{4}$ in.
„ „ D	„ „	„ $3\frac{5}{8}$ in.
„ „ E	„ „	„ $3\frac{3}{8}$ in.
„ „ F	„ „	„ $2\frac{1}{6}$ in.
„ „ G	„ „	„ $2\frac{5}{16}$ in.
„ „ H	„ „	„ $2\frac{5}{16}$ in.

"These levels are taken on the Cornice or balcony which runs round the interior of the building. The level of the cornice at A on the Dome pier is  $6\frac{1}{8}$  in. lower than it is across the South end of the South Transept. Between the South or end wall of the South Transept and the pier which carries the Dome at A, the great arch into the aisle, and the

clerestory wall above are broken through. In a less degree, according to the subsidence of the mass of the dome, this occurs in connection with each Dome pier.

"Very strong horizontal iron ties were put in about 100 years since at the level of the internal cornice or balcony, but the results of the dislocation are still seen, inasmuch as the arches of the clerestory windows are so broken as to be in parts resting on the vertical iron stanchions which should only support the glazing, and should not in any way be forced against the arch. . . ."

The photographs<sup>8</sup> show some of the cracks to which Mr. Clarke drew attention, and in proof of the early origin of the trouble, we may give a single illustration from the building itself. The clerestory windows nearest to the dome, those of choir and nave as well as those of the quarter domes, are much distorted. The sills all slope in the direction of the dome itself, and have been levelled up. Above these windows the whole wall has followed the same inclination, and just below the cornice wedge-shaped courses of stone have been inserted, the flat ends towards the dome and the thin ends east and west, &c., to enable the cornice to run through. These wedge-shaped pieces may be seen on the north, as well as on the south side of the church. From this it is evident that a settlement was early at work, in spite of Wren's plans for spreading the enormous weight of the dome over as wide an area as possible; the repairs are recorded, and before the height of the cornice was reached a space of several inches had to be made up to the level.

Early in the nineteenth century the City of London was engaged in enlarging or building new sewers, and one of them was put down on the south side of the church. This probably had the effect of disturbing the even flow of water. There were also other causes which may have conduced to a similar effect, and to which we refer later on.

Apart from the settlements which, we think, occurred in the early eighteenth century, there have been three sources whence the ground on which the Cathedral is built has most probably been affected. St. Paul's stands on a hill, and since the Cathedral was built this hill has been gradually covered in, by buildings and paved roads, yards, and footways. A roof has thus been placed over the whole area by which the drainage of the surface water has been affected, and for some time past this surface water has been unable to percolate freely as it did in the seventeenth and eighteenth centuries.

Next, the various alterations along the riverside more immediately south and west of the Cathedral,

<sup>7</sup> See Appendix IV.

<sup>8</sup> See Appendix IV.

have affected the flow of water in the lower strata above the London clay.

Thirdly, the ground all round the Cathedral has been subjected to sundry borings for sewers and the like, as well as for excavating the deep basements of the surrounding warehouses, while the pumping operations at Blackfriars in connection with the Underground Railway have probably drawn the water from the site.

We may here quote two instances of proposed underground workings close to the Cathedral in the last century, which were diverted owing to the representations of the Cathedral's guardians.

In 1831, a sewer was proposed along the south side of the churchyard, a course similar, though at a higher level, to that of the London County Council sewer which has just been abandoned. Mr. Cockerell, the Surveyor to the Dean and Chapter, investigated the proposal with Messrs. George Rennie, the engineer, and Robert Smirke, the architect, and together they issued the following report:—

“We, the undersigned, having by direction of the Dean and Chapter of St. Paul's Cathedral examined and considered the situation in which the Commissioners of Sewers have begun to construct a Sewer on the South side of the Cathedral, and considering that the footings of the walls rest chiefly upon a thin bed of pot-earth, beneath which is a very deep stratum of sand and gravel, containing a considerable quantity of water, and that the walls of the South Transept have sunk and are fractured, apparently by reason of some partial weakness in this part of the foundations, are of opinion that the security of the Fabric will be endangered if the Sewer is constructed in the Church Yard.

“We are likewise of opinion that however carefully the work may be constructed, it will be impossible to prevent some degree of motion from taking place in the side stratum of sand and gravel either during the construction of the sewer or at a future period in consequence of it; and we therefore earnestly recommend that the Commissioners should be requested to abandon this line for their sewage, and remove it to such a distance as will prevent all risk of injury to the perfect security of the Cathedral.”

Owing to this report the sewer, which was to have run under the road of the Churchyard, was diverted along Carter Lane.

Writing in 1874, Mr. Longman, the author of “The Three Cathedrals of St. Paul's,” says: “Wren's belief in the solidity of the ground for the foundations of the Cathedral has been fully justified by time, but yet there is danger still lurking in the bed of sand which might become serious. If this bed of sand were pierced by a

drain, there would be a great probability of its running off and leaving the pot-earth insufficiently supported.”

The question of the Cathedral's safety was again raised on the promotion of the Central London Railway Bill in 1890. Referring to this in his report to the Dean and Chapter in November of that year, Mr. Penrose, the Surveyor to the Fabric, said as follows: “As there is great probability that a tunnel so placed (*i.e.*, at a depth of more than 70 ft. below the floor of the Church) would drain off water from the lower strata of the gravel and sand which underlie the foundations of the Cathedral and so cause them to some extent to collapse, there would be great risk of serious injury to the structure. This scheme passed a Committee of the House of Commons, but was thrown out by the Committee of the other House, not indeed without cost to the Dean and Chapter, but it appears to be a great danger averted.”

In his evidence supporting the petition lodged by the Dean and Chapter against the Bill, Mr. Penrose said: “The danger to the structure of St. Paul's Cathedral if the proposed works are carried out exists chiefly on account of the sandy nature of the strata upon which the foundations stand. These foundations are laid upon a comparatively thin bed of marl, below which there exists more than 40 ft. of loose sand and gravel. It must also be remembered that St. Paul's Cathedral is erected on the top of a considerable hill. If the water which is mixed with these strata was withdrawn, the result might, in my opinion, be exceedingly serious, as this must cause a very considerable collapse in the strata themselves. . . . In the excavations which must take place for the purpose of the proposed Railway Tunnel, and more especially in the large excavation which would be required for the intended station between Newgate Street and the Cathedral at the depth proposed, which is some 60 ft. below the present surface, there would be very great risk of interfering with these strata, and if this excavation should, as in all probability it must, take place irregularly over the section of the works within the immediate proximity of St. Paul's, the danger would be very considerably increased.”

The following year, on November 10, 1891, in his Annual Report, Mr. Penrose reverts to the same subject: “Last year there had been the alarm of injury likely to arise to the foundations of the Cathedral from the Central London Railway. This apprehension of danger mainly arose from the proximity of the deep underground station, for which a large excavation is required. Since then the Bill has been reintroduced and sanctioned, but the danger to the Cathedral is very greatly reduced owing to the removal of the



Station to a greater distance. There may indeed still be some risk arising from the tube which is to enclose the railway, though to a much smaller extent; still, enough remains to make it of consequence that very great care should be taken that no operations connected with the alterations which I have heard are proposed to be made to some of the Pillars of the Choir,<sup>9</sup> should be carried out in a manner to weaken those supports, and particularly so as there is a want of uniformity in the foundations of the Choir."

We learn further that the Dome and the West Towers were plumbed by the former Surveyor to the Fabric in August 1901, and the results were as follows: The Dome, in a drop of three hundred and thirty feet to the nave floor, was found to incline four and three-quarter inches towards the south-west. The South-West Tower was plumbed from a height of one hundred and thirteen feet, and in this distance the deviation was six inches.

We have no information as to whether the movements in the fabric continued uninterruptedly or not, but we have gathered from various documents, and from the reports made by former Cathedral Surveyors, that the settlements of the fabric which occurred during the building of the Church, and particularly in the piers supporting the dome, have continued in some degree to the present day.

After the weight of the main building had compressed the subsoil to its limit we think it may be assumed that there was a period of quiescence, but that during and subsequent to the erection of the Dome movements began to show themselves as a result of the additional weight.

In order to ascertain the various strata and the exact water level beneath the Church, we have thought it well to make experimental borings at three different points in the crypt, and kept samples of the strata, one set of which has been accepted for the Geological Museum. These were made in March last, and their progress carefully watched. The results disclosed are embodied in the chart which accompanies our Report.<sup>10</sup>

At the same time we had the foundations uncovered at different points, and found the footings were formed of three twelve-inch courses of stone slabs with a projection of two feet, the level of the pot-earth being about four feet six inches below the crypt floor.

We have made a minute and personal examina-

tion of the structure generally, and especially of those parts which appeared to have suffered most by the settlements, and for this purpose five of our meetings have been held in the Cathedral. We have referred to the principal fractures in the building; there are others,<sup>11</sup> and notably that between the Library and the main building, which have had our careful attention. They appear to be of long standing, and we have no record of their origin, but at present they do not give ground for special anxiety. We have seen no evidence of "crushing" as a result of the various settlements.

After mature deliberation and a thorough examination of the Cathedral and its foundations we are of opinion that in spite of these settlements there is no immediate necessity for any extensive remedial measures to be undertaken; but this conclusion is based on the assumption that the present conditions of the subsoil and the present water level will be maintained. We are strongly of opinion that the sensitive condition of the structure makes it necessary that the Church should be kept under constant observation, and we understand that a scheme for this has been formulated by Messrs. Barry and Leslie, your Engineers. We recommend that your Surveyor be instructed to make the necessary arrangements for its adoption, and for readings to be taken every three months.

We also recommend that the condition of the subsoil and the state of the water level be carefully watched and periodically recorded, as all official investigations point to the same conclusion—that in them lie the possibilities of future dangers. In this connection attention should be given to all building operations in the neighbourhood, or mischief of a more serious nature may arise.

We may mention that we have carefully considered the various safeguards and remedies brought forward at our meetings and published by the press and others interested in the building, but we do not advise works of underpinning or of screening the foundations of the Church. We consider that such operations would only be attended by fresh dangers. On the other hand

<sup>9</sup> Mr. Harding, Clerk of the Works at the Cathedral, states that when veneering the pilasters in the choir with marble, the stone, although of the best quality, splintered and flew in all directions when cut, thus showing the great compressive stress it was sustaining. The same thing occurred when recessing

panels in the spandrels of the quarter domes, though the cutting was only two and a half inches deep. In one instance a large piece of stone flew out in the absence of the workmen.

<sup>10</sup> See Appendix II.

<sup>11</sup> See Appendices III. and V.

we consider that there is a large amount of structural work required in repairing the fabric which should be proceeded with without delay.

The condition of the external stonework also calls for attention, and we have had the advantage of the opinion of Professor Church, who advises the removal of the incrustations of soot and gypsum by a wood tool, and the experimental spraying of portions of the surface with baryta.

The coffered vault of the west portico, we understand, had for some years shown signs of being to a certain extent crippled, which damage may have been caused by a slight movement to its abutments. This has now been rectified, and the structure, as reinstated, is in practically the same condition as it was left by Wren. Mr. W. D. Caröe, the Architect to the Ecclesiastical Commissioners, was kind enough to attend our last meeting in the Church, and agreed with what was being done.

The plaster of the walls of the crypt, which has been removed, should be reinstated throughout

the interior. It was evidently Wren's intention that the crypt walls, being composed of stones of varying quality, should be plastered, and the protection thus afforded is very valuable.

The heating apparatus is antiquated and should be abolished. At present the strong sulphur fumes from it undoubtedly have a deleterious effect on the stone. Your Surveyor should be instructed to devise an entirely new system of heating for the Church.

In conclusion we must pay a tribute to the wonderful constructive ability of Sir Christopher Wren. That a building of the magnitude and weight of St. Paul's should have survived the altered conditions of the subsoil without more serious damage is an evidence of his masterly skill and ingenuity, for he provided against every danger known to his time. Other dangers, however, have since arisen which he could not have foreseen, and now, being recognised, they must be met by unceasing vigilance and constant attention.

We are, Gentlemen,

Your obedient servants,

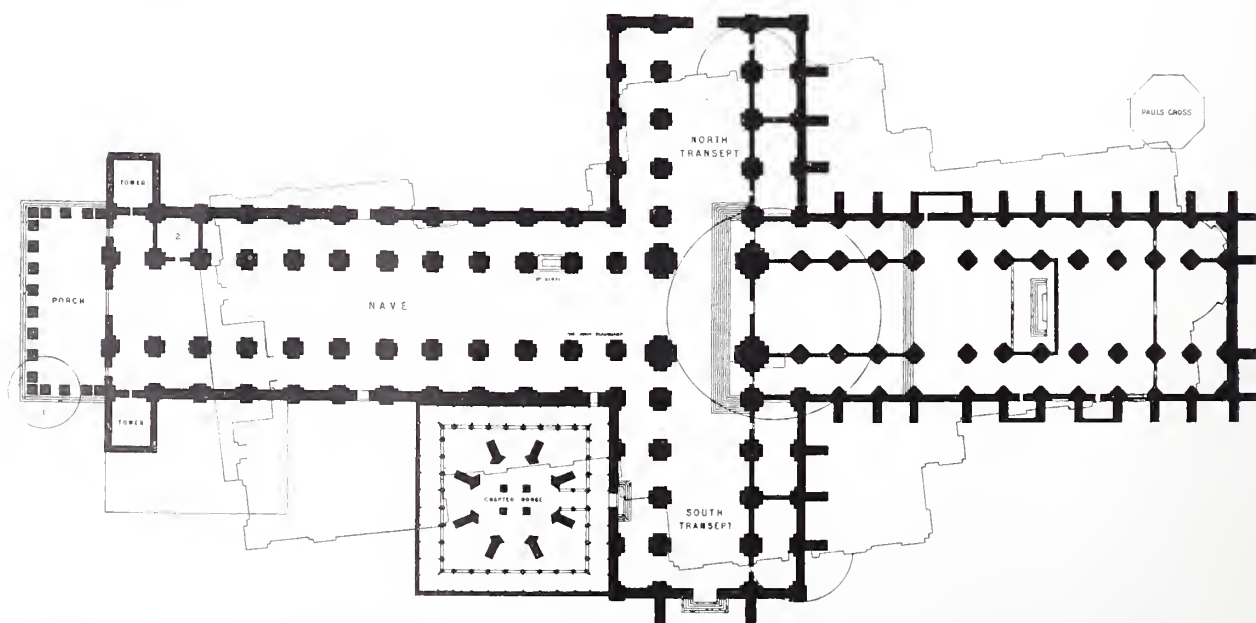
THOS. COLLCUTT, P.R.I.B.A.

ASTON WEBB.

JOHN BELCHER.

MERVYN MACARTNEY.

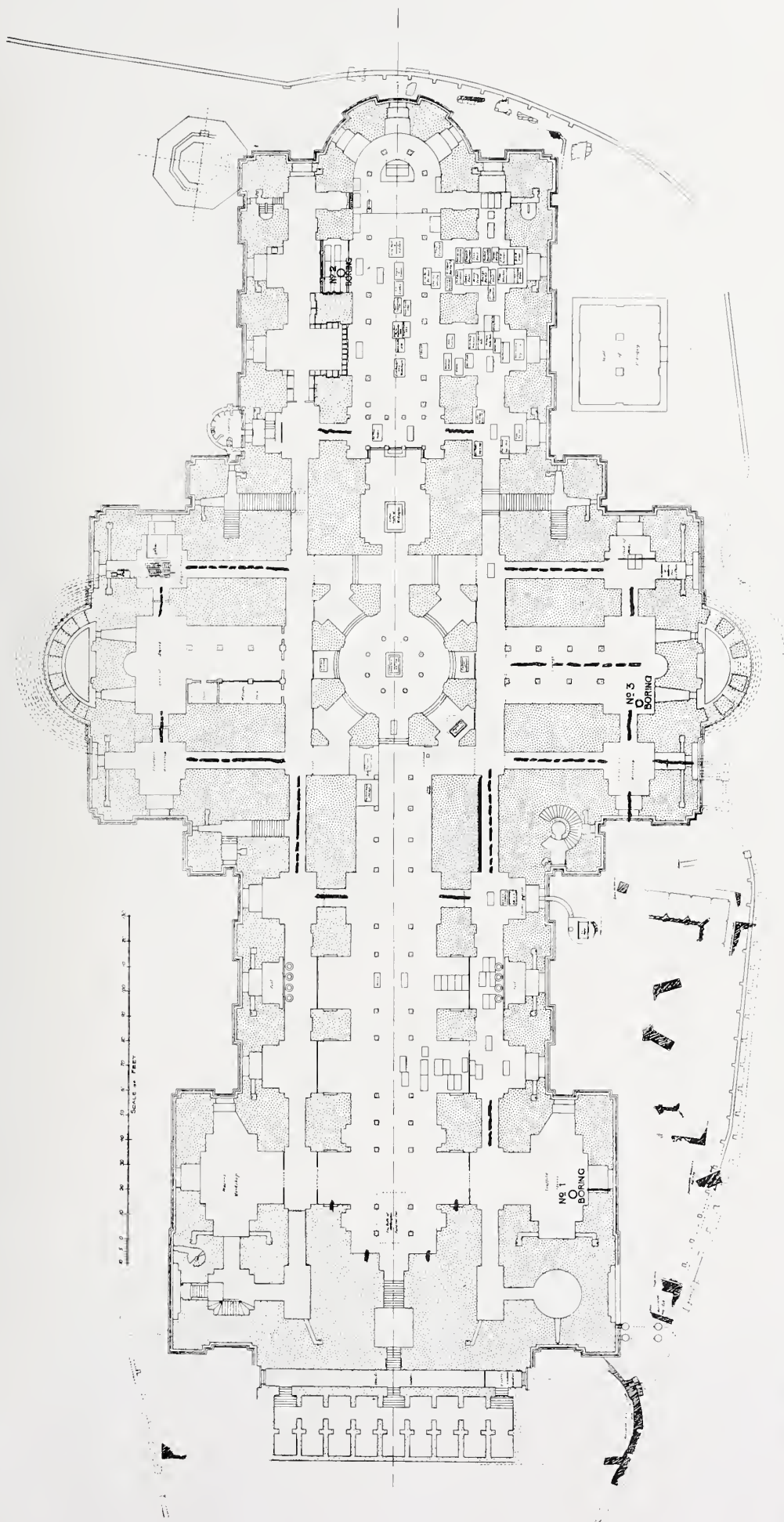
#### APPENDIX I (A).



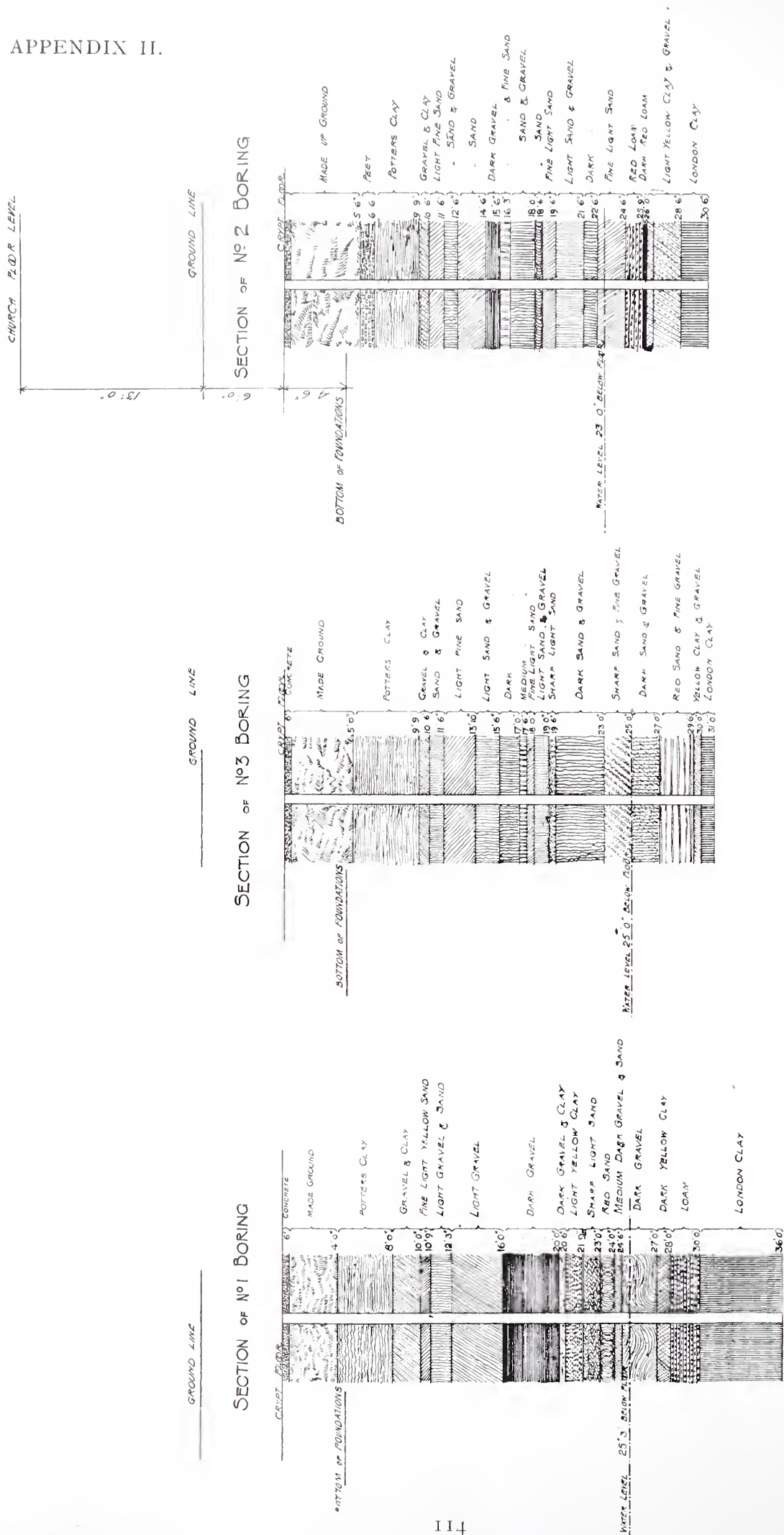
GROUND PLAN OF OLD ST. PAUL'S,

SHOWING IN OUTLINE THE CHANGE OF AXIS IN THE PRESENT CATHEDRAL.



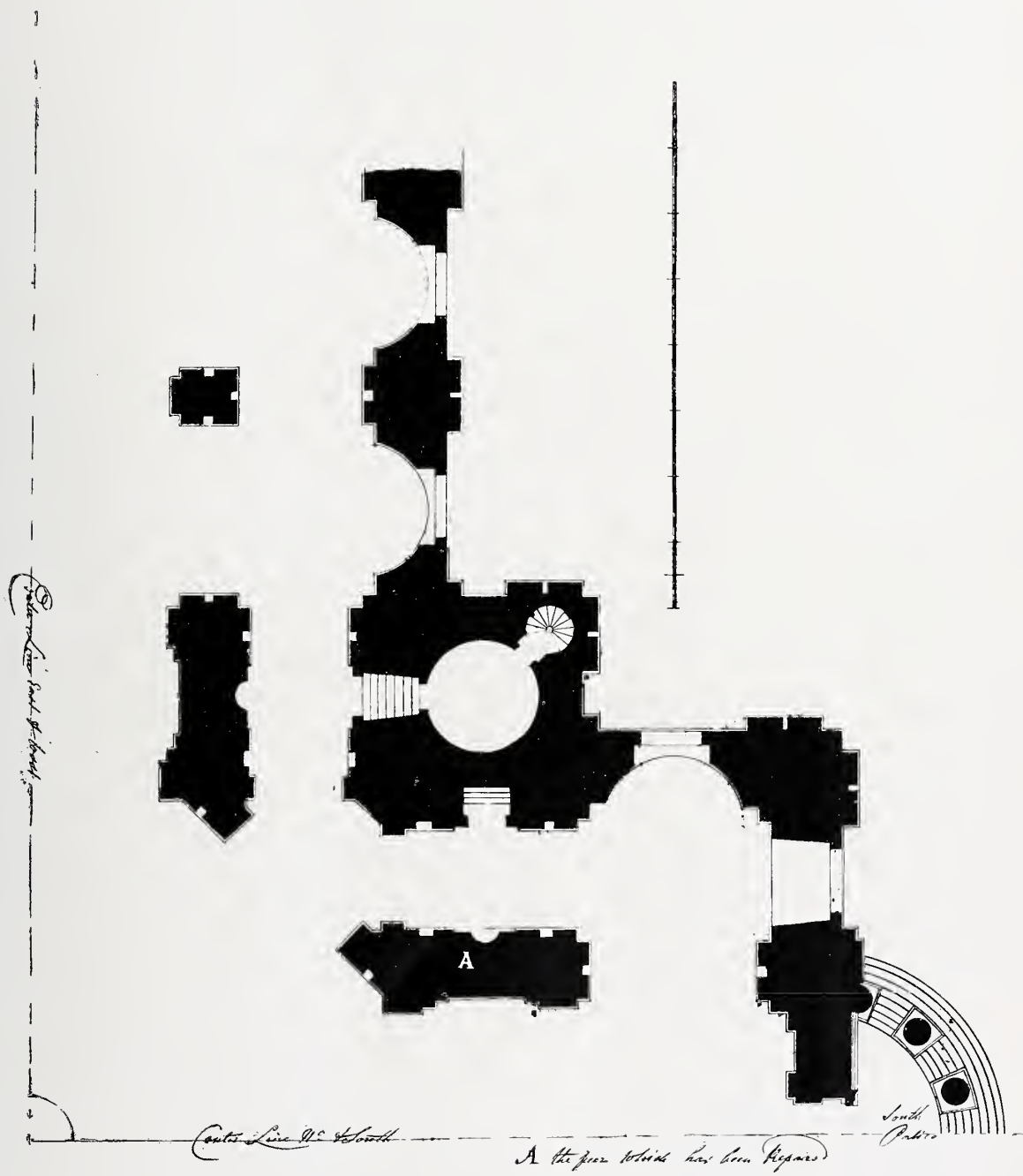


PLAN OF THE CRYPT OF THE PRESENT CATHEDRAL, SHOWING POSITION OF CRACKS IN THE VAULTING AND ALSO THE POSITION OF THE BORINGS.



SECTIONS OF THE THREE BORINGS, THE POSITIONS OF WHICH ARE INDICATED IN THE PLAN ON THE PRECEDING PAGE.





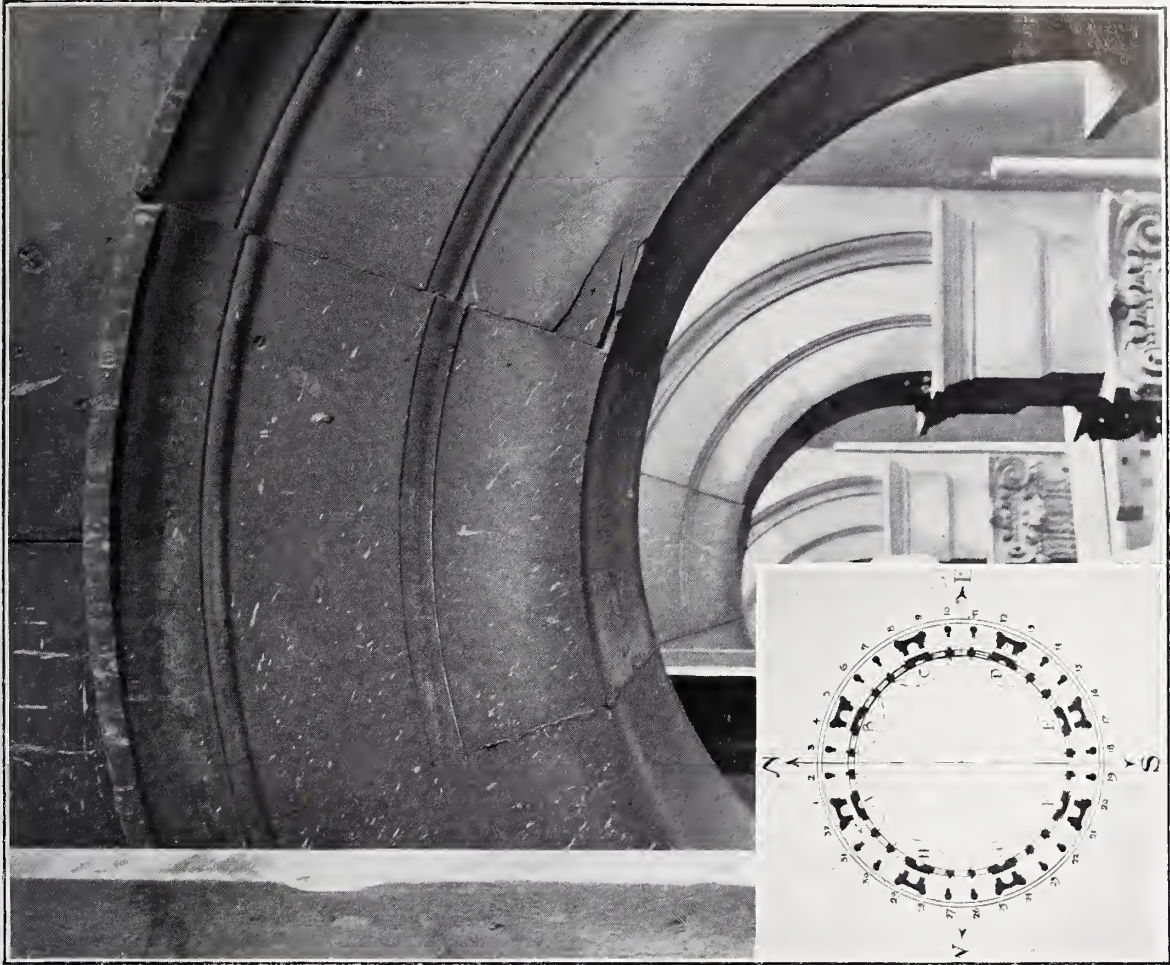
DRAWING OUT OF THE COLLECTION OF WREN DRAWINGS IN THE LIBRARY AT ST. PAUL'S,  
SHOWING THE SOUTH-EAST "PEER WHICH HAS BEEN REPAIRED."

APPENDIX IV.

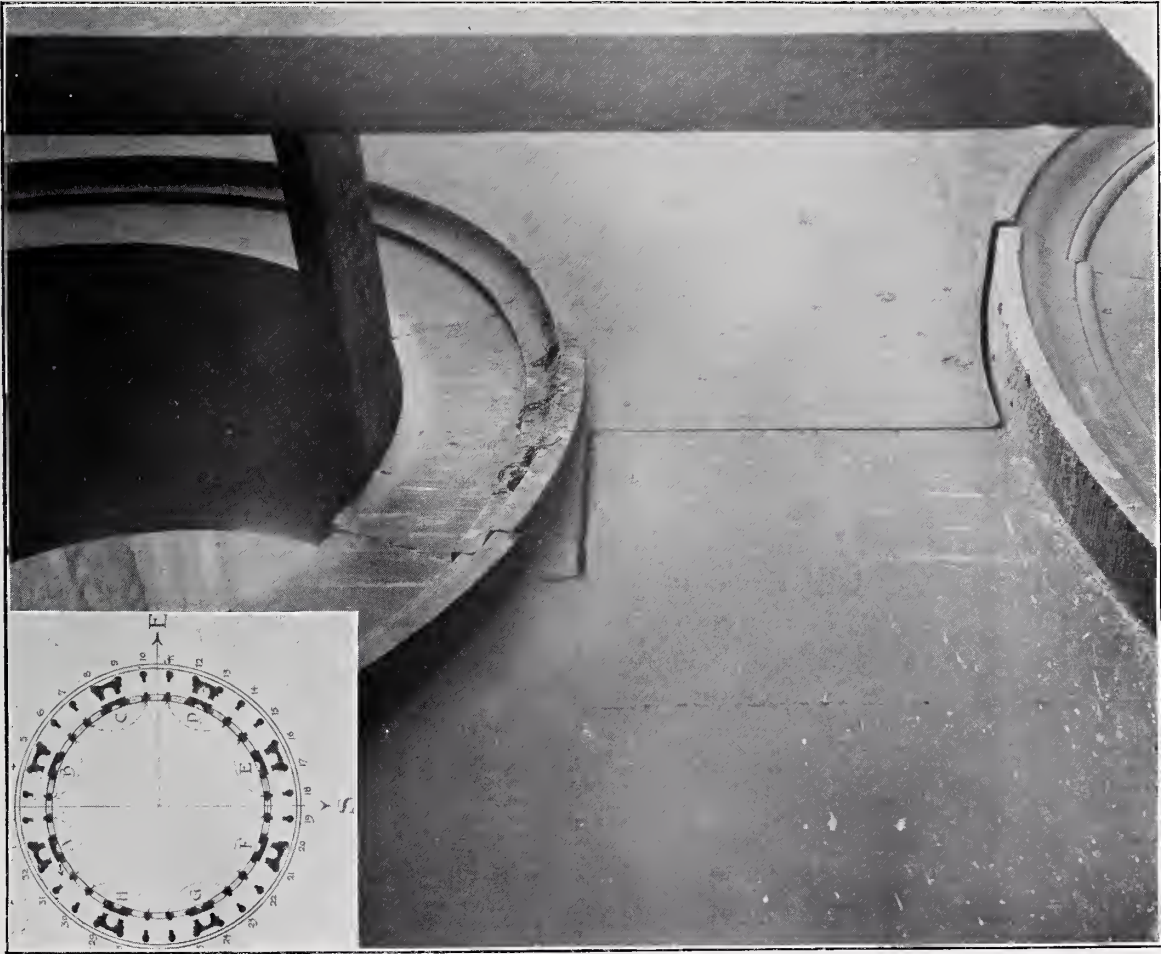


PHOTOGRAPHS SHOWING SINKING OF CORNICE AND CRACKS IN  
EAST CLERESTORY WALL OF SOUTH TRANSEPT.



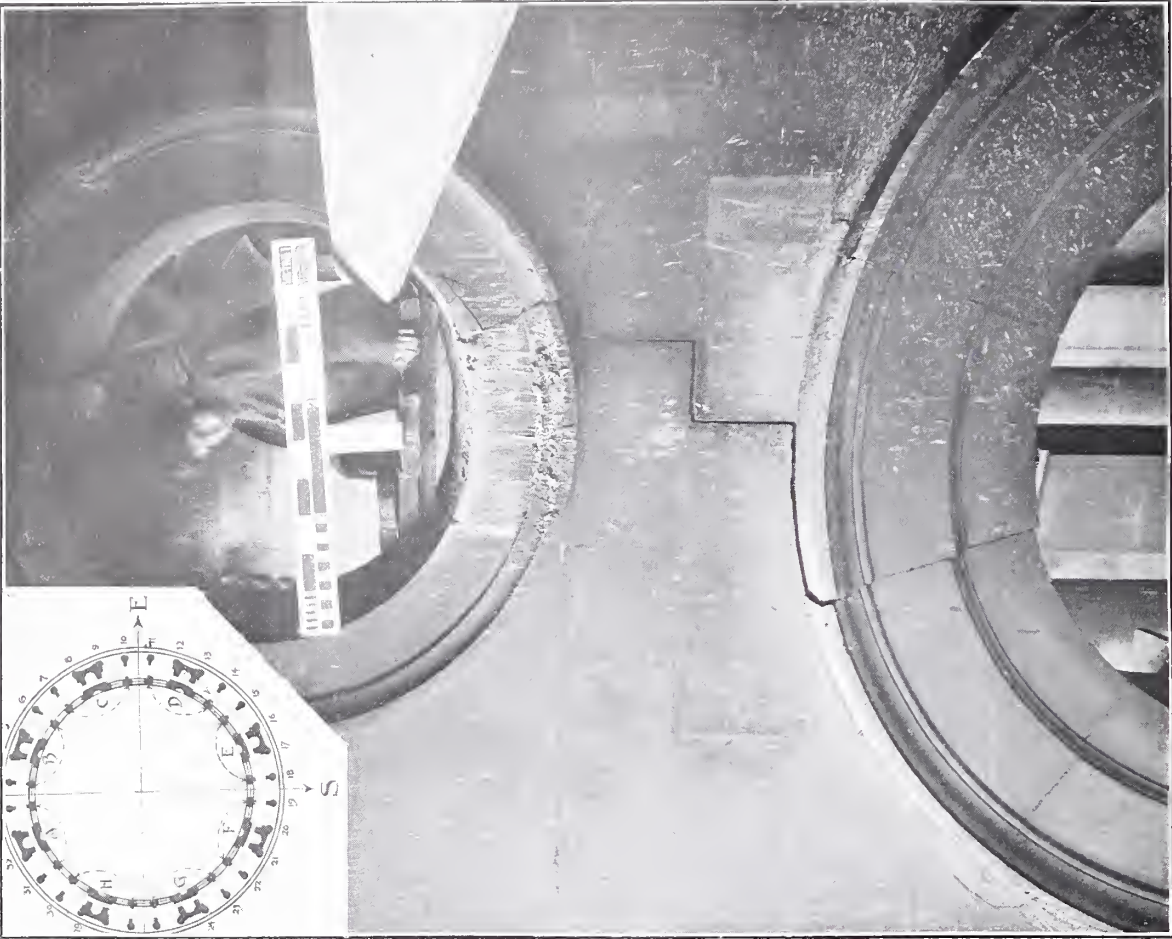


North-west Section : Arch 31. Position II.  
Photographed November 1901.

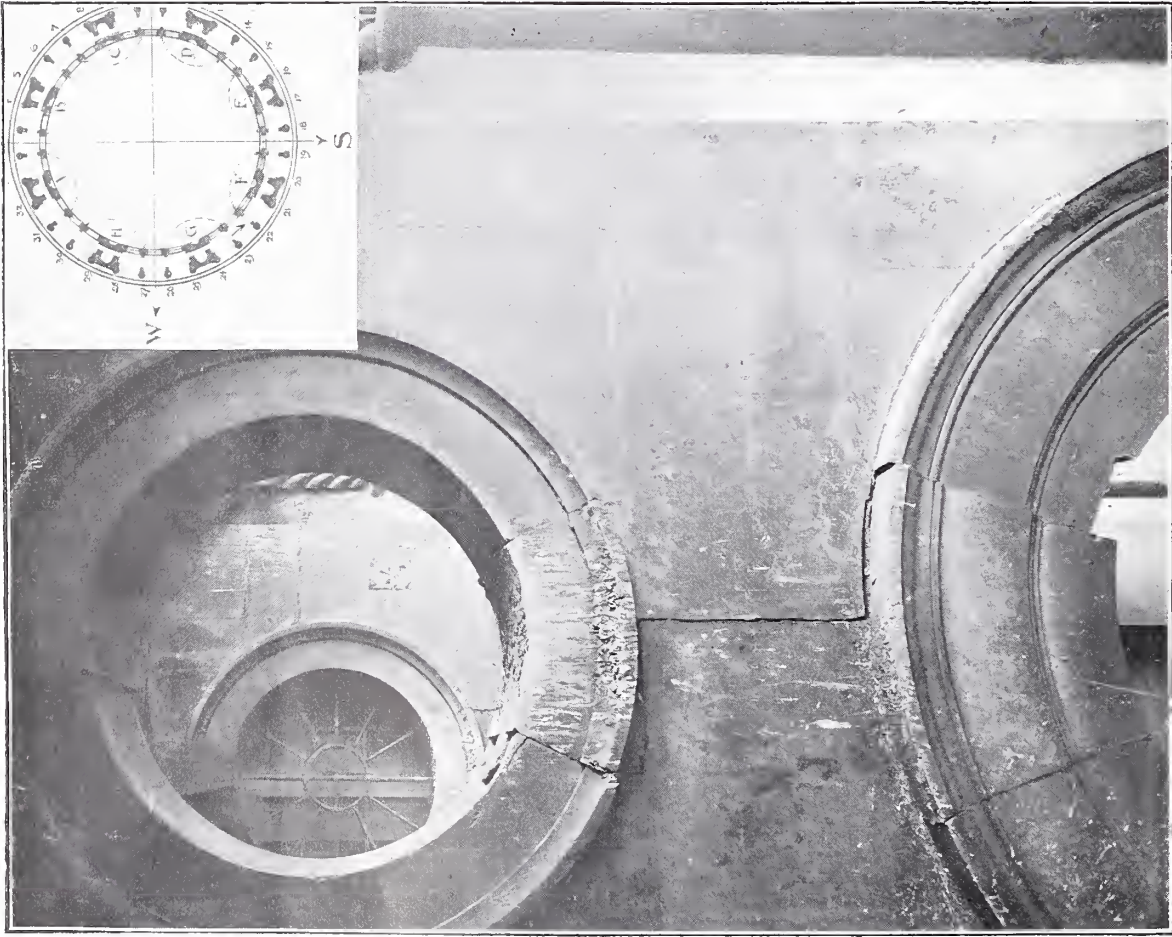


North-west Section : Arch 31. Position I.  
Photographed November 1901.  
CRACKS IN THE BUTTRESSES OF THE DOME.



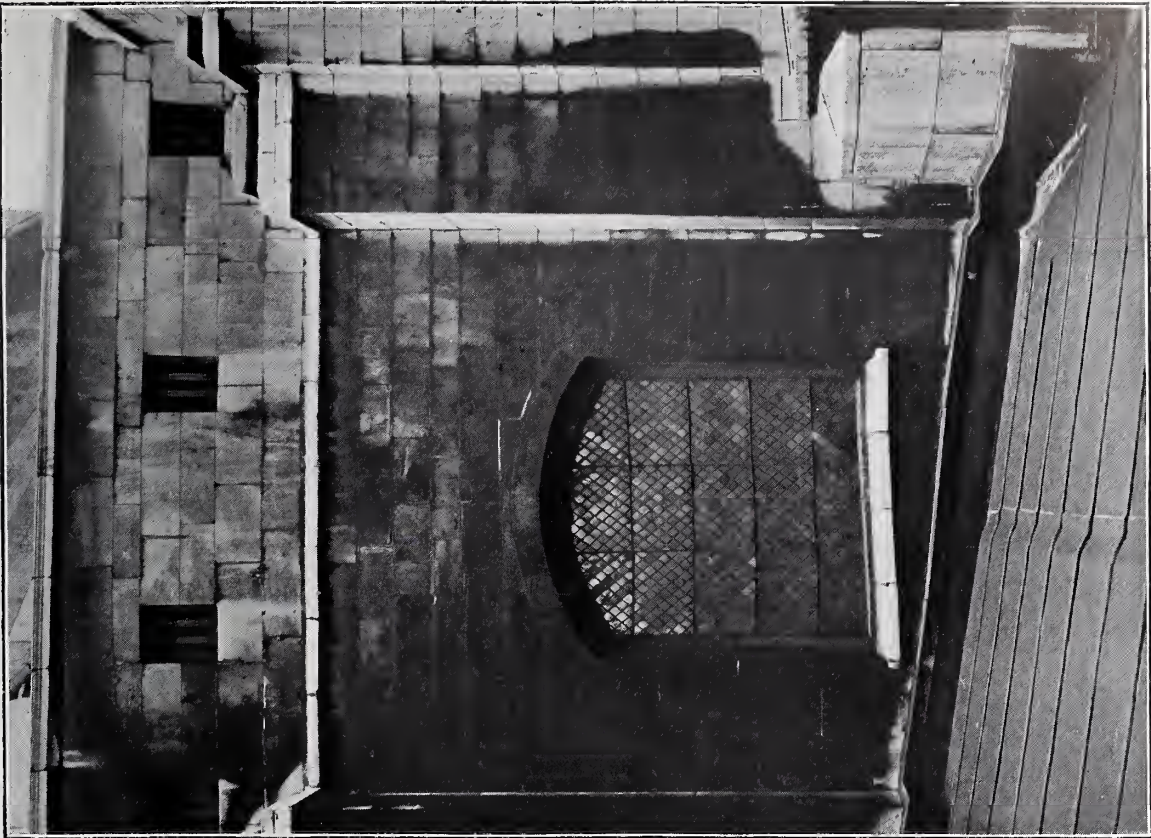


South-east Section : Arch No. 14 from Bull's-eye No. 13.  
Photographed May 6th, 1902.

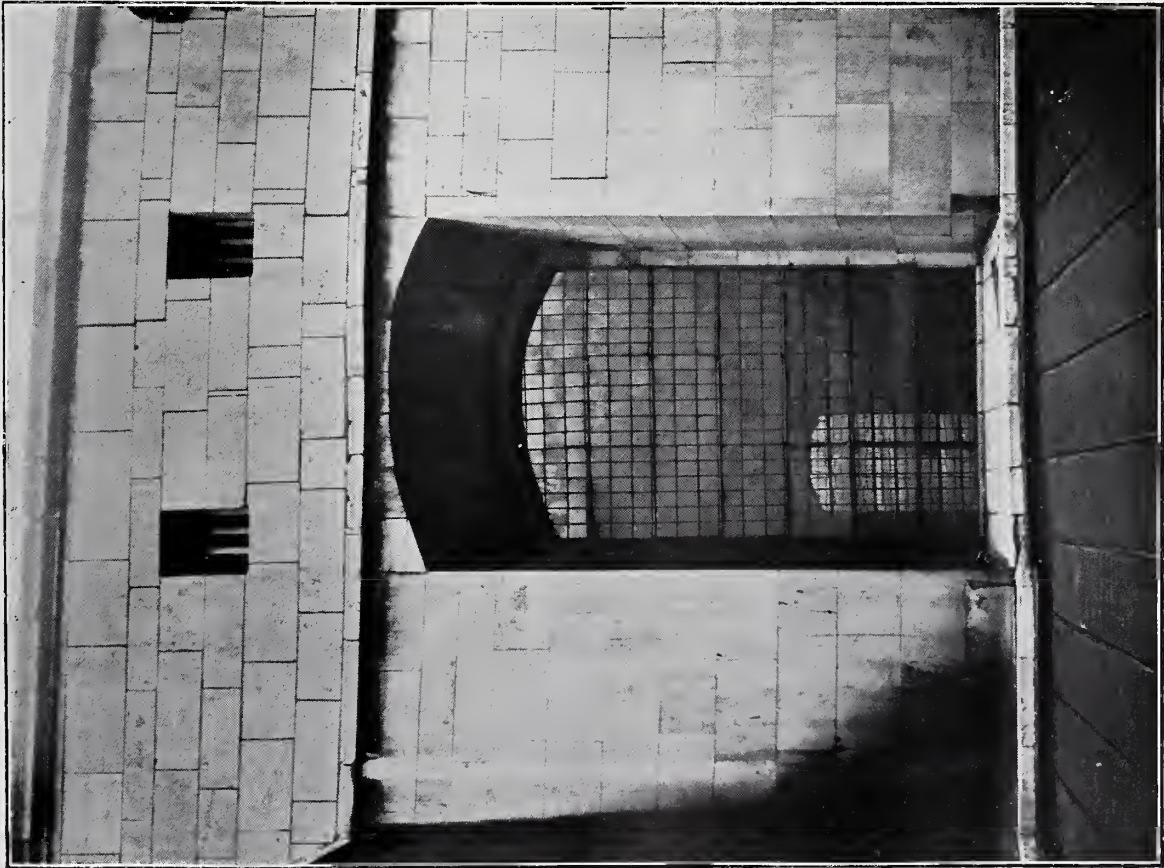


South-west Section : Arch No. 22 from Bull's-eye No. 23.  
Photographed May 13th, 1902.  
CRACKS IN THE BUTTRESSES OF THE DOME,



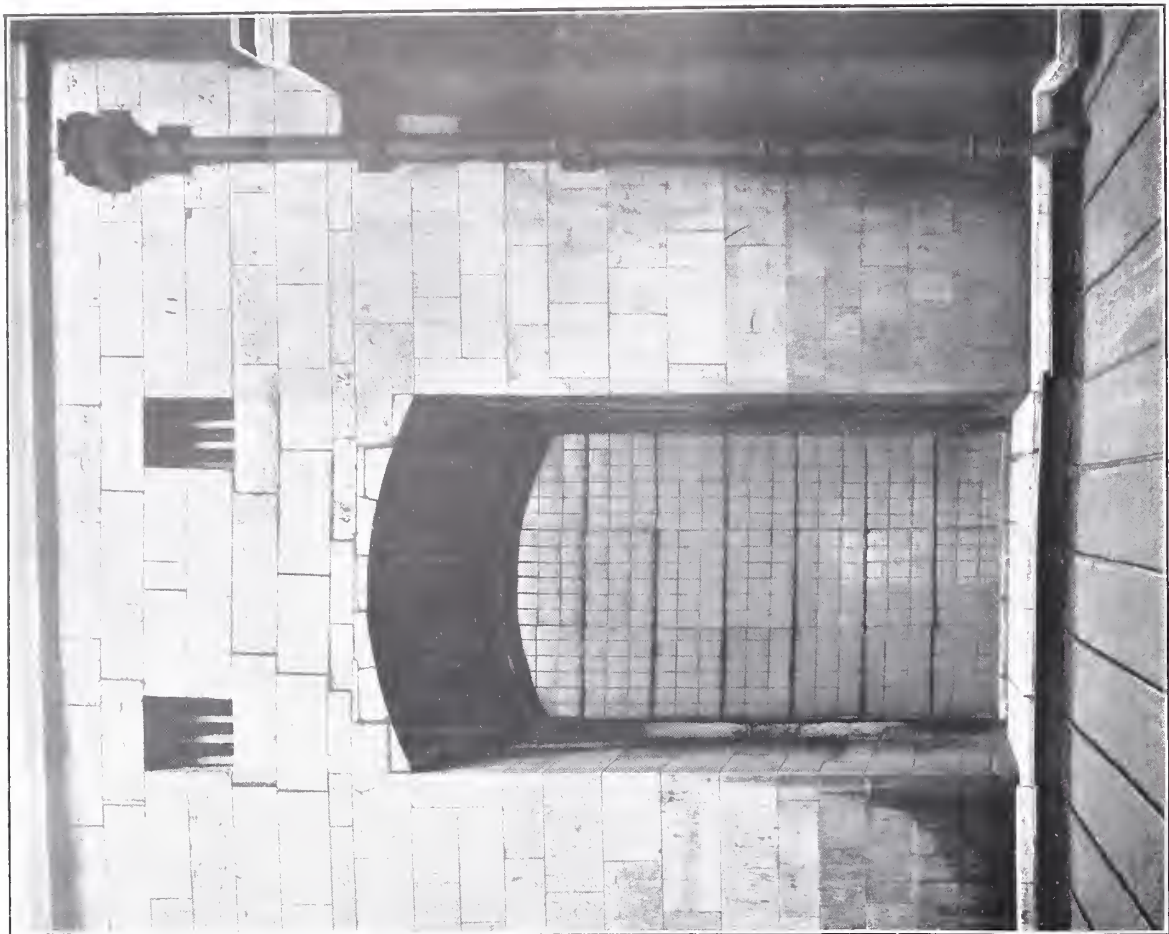


West Wall of South-west Quarter Dome from roof of South Aisle of Nave. June 1907.

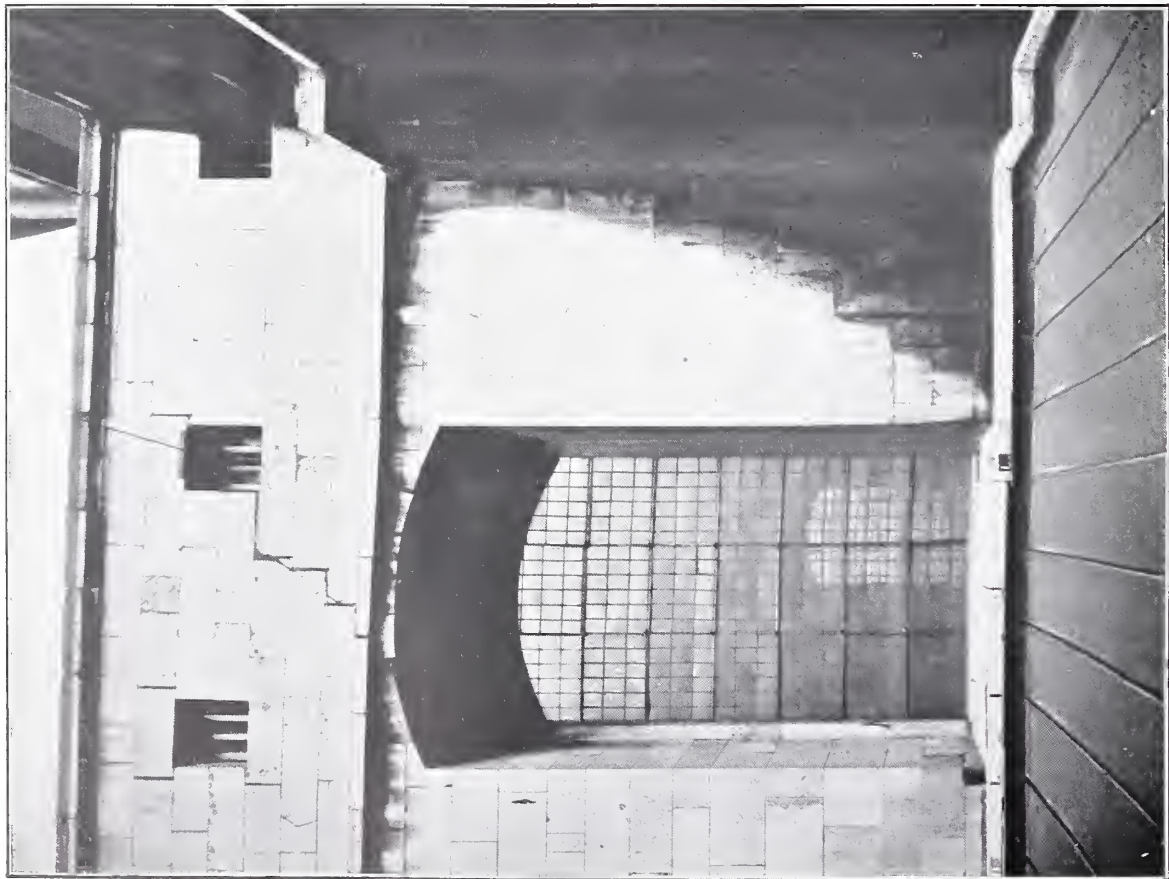


West Clerestory Wall of South Transept, from roof of West Aisle of South Transept. June 1907.  
CRACKS AND SINKINGS IN EXTERIOR WALLS.





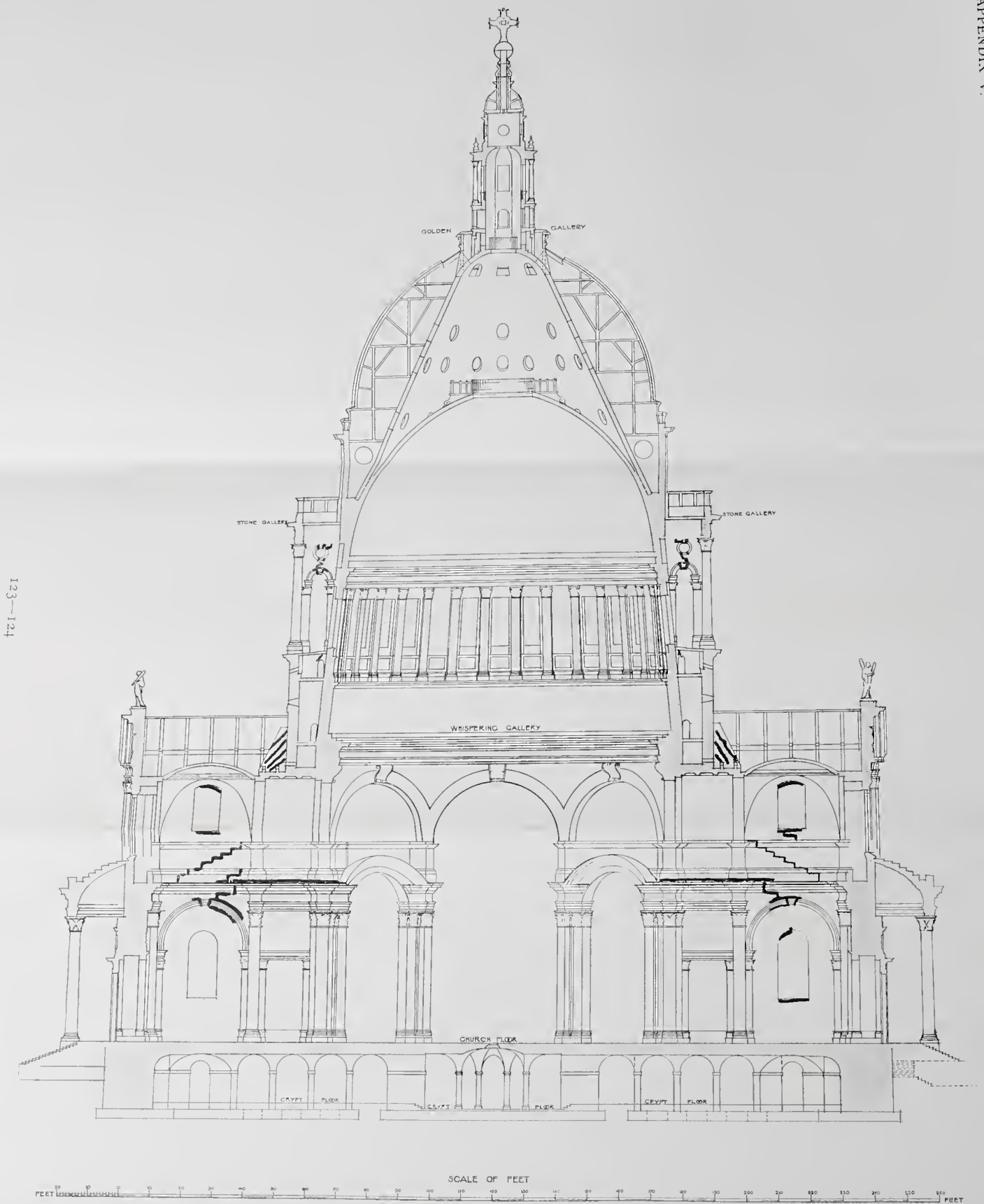
East Clerestory Wall of South Transept, from roof of East Aisle of South Transept.  
June 1907.



West Clerestory Wall of North Transept, from roof of West Aisle of North Transept.  
June 1907.

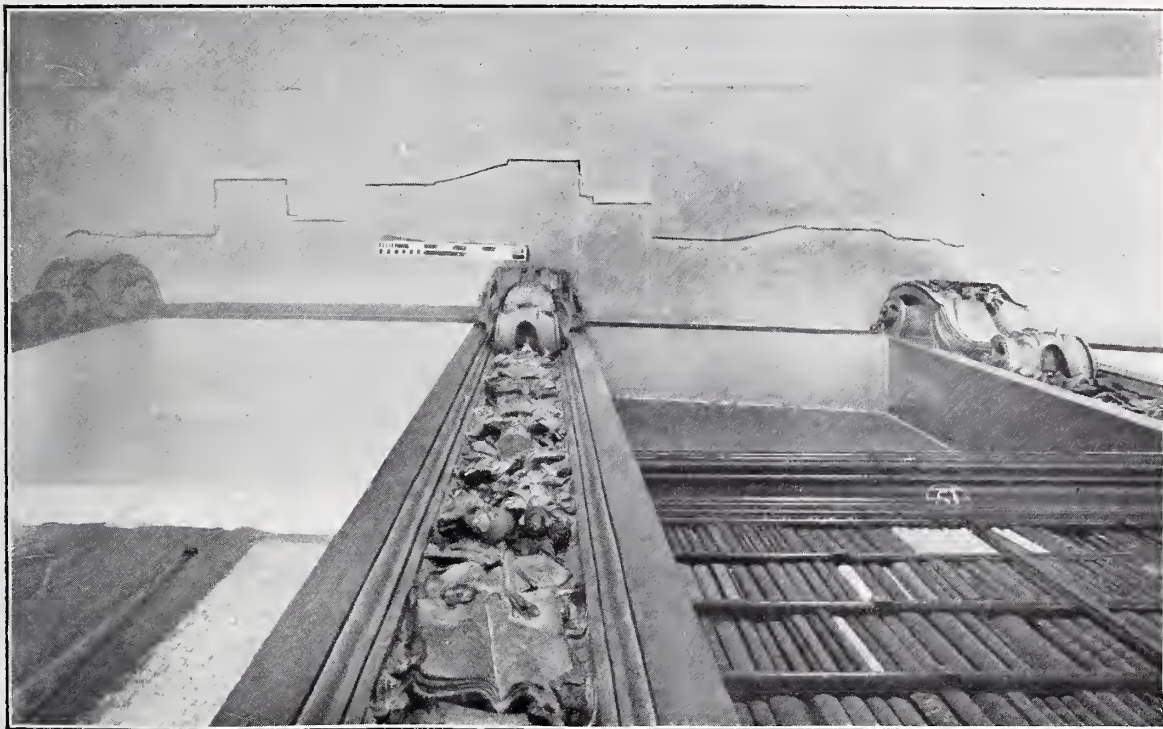
CRACKS AND SINKINGS IN THE EXTERIOR TRANSEPT WALLS.





CROSS SECTION THROUGH THE DOME, SHOWING POSITION OF CRACKS AND DEPRESSIONS IN THE INTERIOR

N.B.—The cracks and depressions are not shown to scale, but have been heavily marked to clearly indicate their positions.



CRACK IN THE LIBRARY CEILING, LOOKING UPWARDS.

Photographed January 1902.

# The United Kingdom Provident Institution.

Henry T. Hare, Architect.



HIS new building, which has been erected to provide offices suitable to the standing of the Institution, and to meet the needs of its increasing business, was opened in July by the Chancellor of the Exchequer. The site of the

building is an important one, being opposite the church of St. Clement Danes, close to the Law Courts, and but a minute's walk from Temple Bar. The building not only provides for the Institution, but includes a considerable area available for letting.

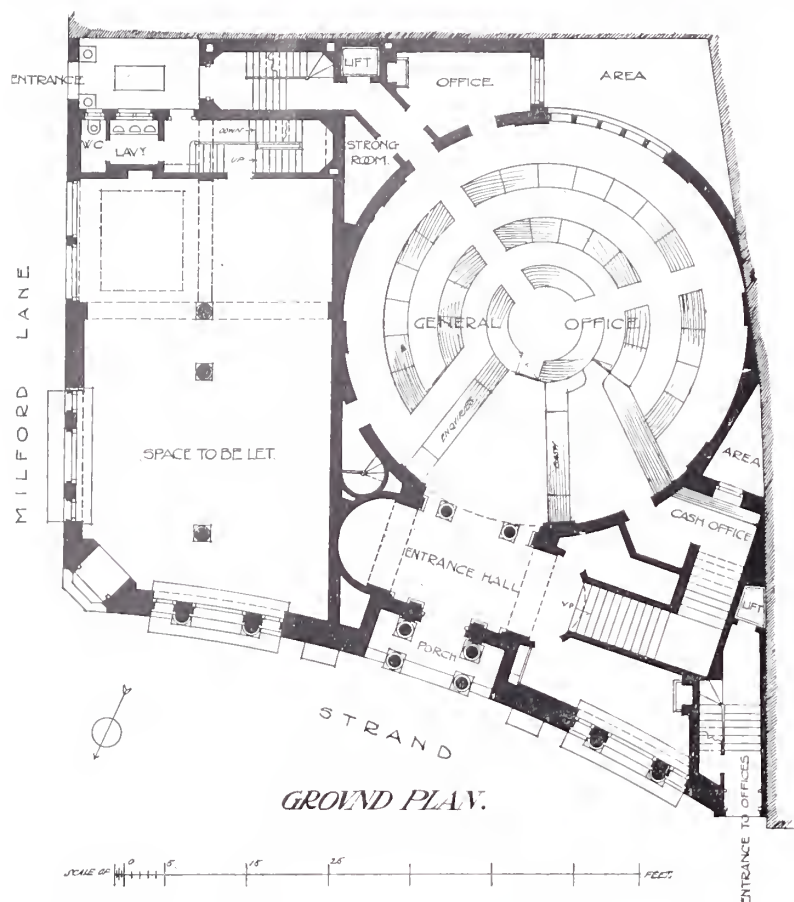
The façade is of Portland stone on a base of grey-green granite. At the mezzanine floor level are three groups of figures by Henry Poole depicting (east to west) "Justice and Truth," "Temperance and Prudence," "Security and Industry." The same artist has also executed the group over the first-floor angle window representing "Prosperity," and the figures of "Watchfulness" and "Benignity" on the angle turret. The low-relief figures between the windows at the

second-floor level are the work of F. E. E. Schenck. There are ten in all, each figure being 7 ft. 6 in. in height, representing the virtues of "Faith," "Hope," "Wisdom," "Peace," "Temperance" (two), "Truth," "Justice," "Chastity," and "Industry."

The interior courts and light wells are lined with white glazed bricks, supplied by Allen & Son of Halifax.

The main entrance is in the centre of the frontage, and has a recessed porch which is enclosed, when the office is not open, by bronze sliding gates. The outer doors are also sheathed with bronze. Immediately inside is a spacious entrance-hall with a vaulted ceiling covered with vitreous mosaic, in the central compartment depicting the Signs of the Zodiac around a sun, being designed by J. Dudley Forsyth and executed, like all the other mosaic ceilings and wall linings, by Rust's Vitreous Mosaic Co., of London. On the tympanum facing the entrance is a decorative mosaic by Professor Moira representing "St. George and the Dragon." The walls here are lined with





GROUND PLAN.

marble, the monolith pilasters and columns being of selected Swiss Rubane cipollino, and the floor of Italian pavonazzo, verd antico, and Siberian green. The bronze lantern is the work of Baguès Frères, of London and Paris.

The general office opening out of the entrance-hall is a circular apartment, 50 ft. in diameter, covered by a flat dome, and lighted by a circular skylight, 18 ft. in diameter, the last-named

being the work of W. H. Heywood & Co., of London and Huddersfield. Like the entrance-hall, it is designed and decorated in the style of the First Empire, and by the same artists. It is lined entirely with marble and mosaic, a scheme of green, purple, and white, relieved with the mat gold and burnished glitter of the ormolu bronze parts. The eight green cipollino marble monolithic pilasters which divide this hall into bays are from a specially quarried block of exceptional width, and ribs of the same marble carry the line up to the central light in the dome, which is framed with a great bronze laurel-roll edged with cipollino marble. This roll is intersected at the junction with the ribs with cross ribbons, from which are suspended eight bronze electroliers. The wall linings in the bays are of violet and Greek cipollino, the former being a new variety of marble. A frieze, 5 ft. deep, runs around seven bays, the eighth being occupied by a large stained-glass window by J. Dudley Forsyth. The scheme of this window is governed

by the sculptured frieze which the five upper lights (of which details are given) intercept, the scheme of figures being carried through them. The golden bronze of the sculptured figures is in effect felt in the window, the subject of which is "Fructus Virtutis." In the five lower lights of the window enrichments in design of a more ornamental nature, embodying emblems and trophies, are carried out, and the whole is in



"Wisdom."

"Hope."



"Chastity."

"Industry."



"Truth."

"Justice."

SIX OF THE FIGURES IN LOW RELIEF ON THE UPPER PART OF THE FAÇADE.

F. E. E. SCHENCK, SCULPTOR.



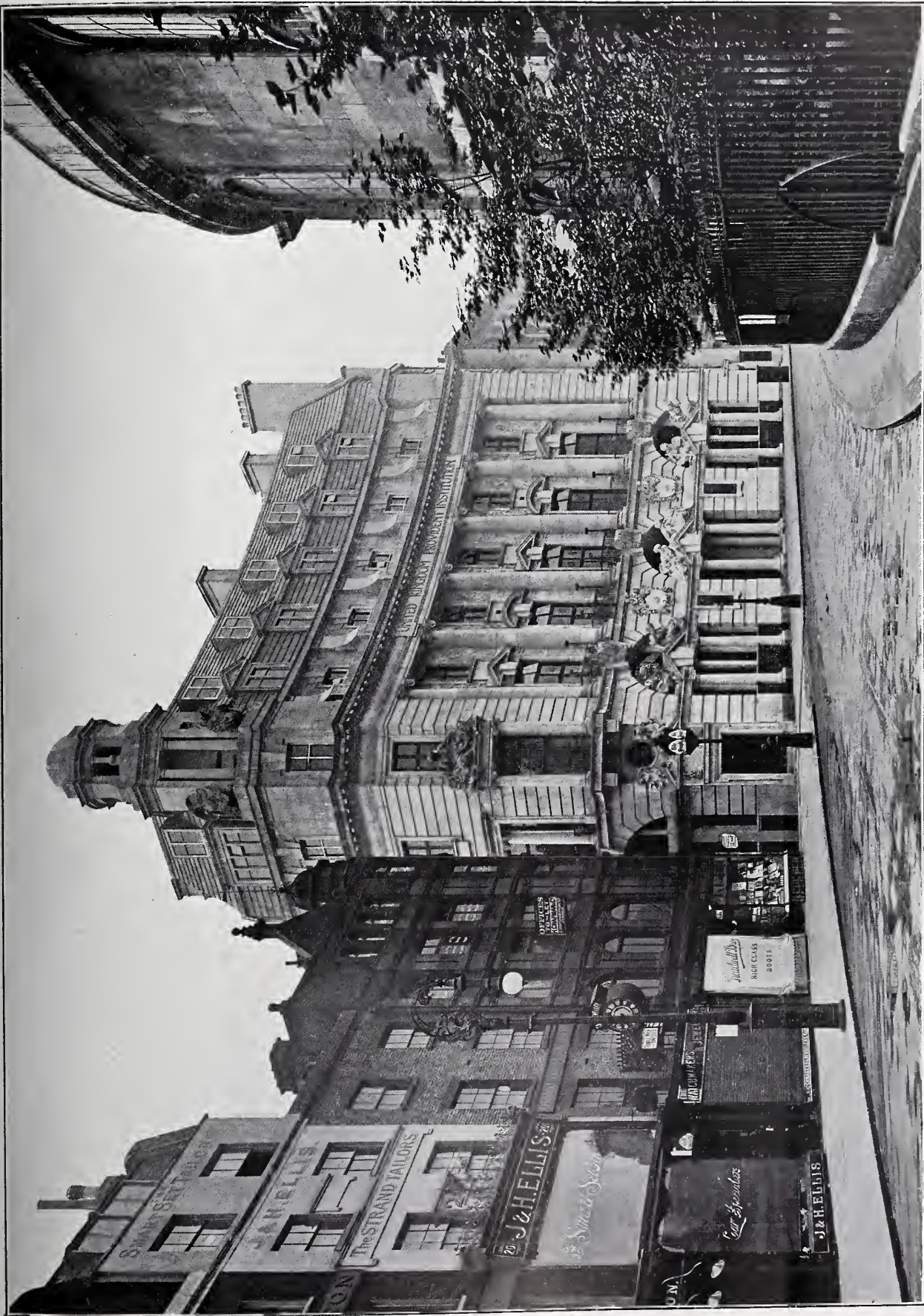


Photo: Arch. Kenton Photo Bureau.

GENERAL VIEW FROM THE EAST.

The sculptured figures on the angle turret represent "Watchfulness" and "Benignity", that over the angle window on the first floor "Prosperity." They are the work of Mr. Henry Poole.



*Photo: Arch. Review Photo. Bureau.*

## DETAIL OF EAST ANGLE OF FAÇADE.

The façades are in Portland stone. The sculptured figures over the first window are of "Justice" and "Truth," and are the work of Mr. Henry Poole. This corner part of the premises on the ground floor is available for letting. The door (not the principal entrance) is of mahogany, and the grilles and balcony railings are of bronze.





*Photo : Arch. Review Photo. Bureau.*

THE ENTRANCE-HALL FROM THE EAST, LOOKING TOWARDS THE MAIN STAIRCASE.

The style is that of the First Empire. The walls are lined with Swiss Rubane and Greek cipollino marbles, the capitals and bases of the columns, the skirtings, panels, and enrichments being of ormolu bronze designed by Mr. F. Lynn Jenkins. The mosaics on the vaulted ceiling were designed by Mr. J. Dudley Forsyth, that in the central vault depicting the Signs of the Zodiac. The marble floor is of Italian pavonazzo, verd antico, and Siberian green. On the tympanum over the entrance to the general office (on the left) is a mosaic representing St. George and the Dragon, by Professor Moira. A detail of this appears on another page.





Photo: Thomas Fall.

DETAIL OF UPPER PANELS OF STAINED-GLASS WINDOW IN THE GENERAL OFFICE

BY J. DUDLEY FORSYTH.

character with the style adopted for the room. The frieze, the work of F. Lynn Jenkins, has a Penteli statuary marble background, on which are ormolu bronze figures in high relief. The motive of the frieze is "Life." Continuity of effect in the frieze is obtained by the large bronze panels on the pilasters at the same level, which act as grilles to the fresh-air inlets. These panels, the door architraves, radiator frames, skirtings, the bases and capitals of the columns, and decorative rolls, both here and in the entrance hall, were designed by Mr. Jenkins, and are of ormolu bronze richly chased. They have been very carefully worked in the style of the First Empire, and the Artist went to great trouble to obtain the exact colour of the lacquer in the best work of that period. The counter fittings and gate in ormolu bronze have been designed and executed by J. Starkie Gardner & Co., the same firm being responsible for most of the other bronze and metal work, &c. The counters have panels of very fine verd antico marble.

At the west end of the entrance-hall is the main staircase, lined entirely with marble, the panels being of Italian pavonazzo framed in Greek cipollino, the steps being of Piastraccia, and the landing pavements of the same marble with green Tinos introduced. The ceilings of the staircase are also lined with marble, antique Swiss cipollino and very light Skyros being the varieties employed. This and all the other marble work in the building was executed by H. T. Jenkins & Son, of Torquay.

The bronze enrichments, cornices, &c., on the main staircase were designed by F. Lynn Jenkins. The two stained-glass windows on this staircase are the work of J. Dudley Forsyth. The first, representing "Providence our Instructor," is shown in the view of the staircase; the second, "The Light of Truth," by a detail view.

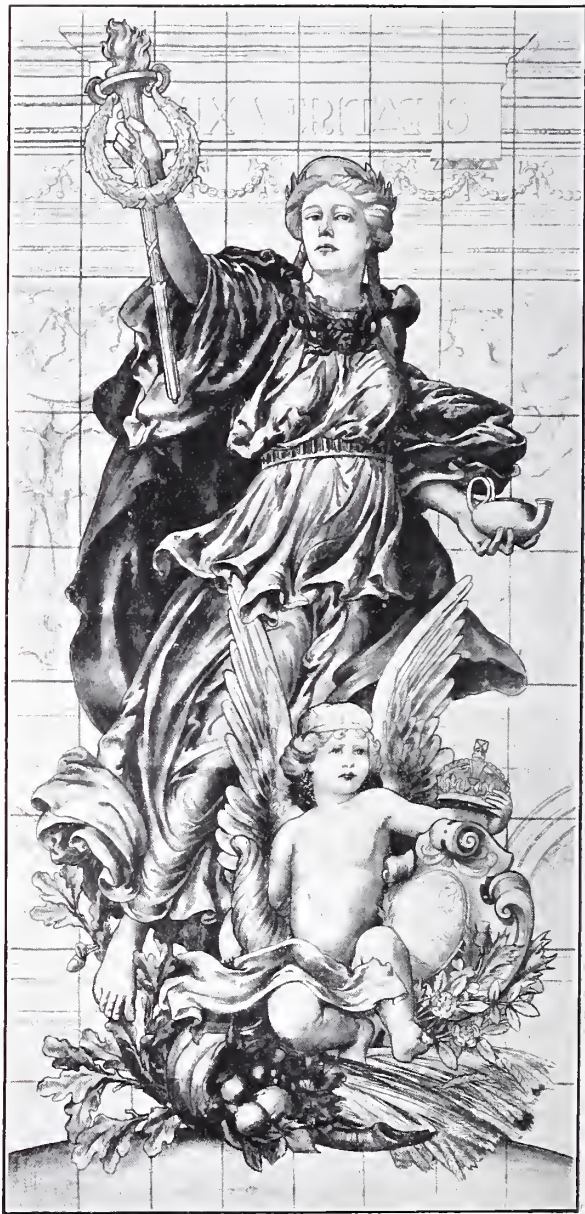


Photo: Thomas Fall.

STAINED-GLASS WINDOW ON THE PRINCIPAL STAIRCASE, "THE LIGHT OF TRUTH."

BY J. DUDLEY FORSYTH.





*Photo : Arch. Review Photo Bureau.*

VIEW OF THE GENERAL OFFICE FROM THE ENTRANCE-HALL.

The style adopted for this and the entrance-hall is that of the First Empire. The wall space generally is divided up into eight bays, seven of which have a frieze, 5 ft. high, designed by Mr. F. Lynn Jenkins; the eighth bay is filled with a large stained-glass window by Mr. J. Dudley Forsyth. The colour scheme is cool grey green with purple and white, relieved with mat gold and bright ormolu bronze.

One of the most effective marble schemes is that of the Upper Hall leading to the Board-room, &c., where verd antico has been used for the mouldings, the wall-linings being of Irish green and antique Swiss cipollino. The large pilasters here are treated with inlays of the unique blue sodolite from the Princess Quarries

in Canada, so named after the Princess of Wales, who encouraged their development. The marble floor is of Italian pavonazzo, verd antico, and Siberian green. The ceiling, vaulted and treated with gold, is the work of F. E. E. Schenck. There are two windows, both of which are filled with stained glass by Professor Moira. The larger





Photo: Arch. Review Photo. Bureau.

## DETAIL OF THE COUNTER IN THE GENERAL OFFICE.

The first bay of the frieze seen in this view shows a winged figure "Immortality," followed by "Force," "Primitive Man and Woman," "Law," "Virtue repelling Vice," "Youthful Aspiration and Ambition." The second commences with the winged figure of Icarus, typifying "Youth," and there follow Psyche and Cupid, denoting the "Soul" and "Love," "Experience teaching Youth," "Sorrow" standing behind "Experience," "Man," the hunter or breadwinner, and "Motherhood"; while the remaining group of three figures in this panel denotes "The Promise of Success," "Health and Happiness," and "Plenty." The counter fittings are of ornolu bronze with bright and gold effects, and the panels in the counter are of fine quality verd antique marble.





DETAIL OF THE FRIEZE IN THE GENERAL OFFICE.

This was designed by Mr. F. Lynn Jenkins, the figures being of ornolu bronze on a background of Penteli statuary marble, the frieze being 5 ft. in height. This bay represents "Providence," and the paying in and withdrawal of savings.

Photo : Arch. Review Photo, Bureau.



CEILING-PAINTING IN THE BOARD-ROOM.<sup>1</sup>

BY PROFESSOR MOIRA.

<sup>1</sup> The subject is an allegory symbolical of Providence protecting Childhood, Chastity, and the Fruits of Abundance from the Evil Powers.

In the central group a stately female figure, clad in a loose rich robe of gold, rests her right hand on the shoulders of a young girl, her left grasps the flowing ends of an ivory-coloured drapery, on which reposes the figure of a boy surrounded by various fruits; above this hangs the veil of obscurity, represented by a huge crimson curtain, surmounted by a reclining female figure with a branch of laurel in her hand representing Peace. The emblem of Hope is depicted by numbers of cupids who are endeavouring to hold up the curtain, which is in danger of being torn down by the machinations of the Evil Powers.



ELECTRIC-LIGHT BRACKET IN THE BOARD-ROOM.

one represents "Temperance," and the smaller contains a badge and motto. The doors opening on to this landing are of Spanish mahogany with finely figured panels. In the lunettes of the vaultings are three decorative panels in ormolu bronze and mother-of-pearl by Mr. Lynn Jenkins.

The principal room on the first floor is the Board-room, in Georgian style, with wainscot panelling having carved enrichments. This woodwork was executed by W. Aumonier & Son, London, who also executed the panelling in the adjoining managing director's room and the smaller rooms for the proposal clerk and the medical officer on the same floor. The ceiling-painting by Professor Moira is more particularly described under the detail illustration. It is surrounded by a frame of enriched plaster-work, this and the other enriched plaster-work being modelled by F. E. E. Schenck. The furniture, specially designed by the Architect, is executed in wainscot oak to harmonise with the panelling, the upholstery being carried out in a dull surface green leather, with carpets and curtains of similar green tint to match. The furniture and parquet flooring was executed by A. J. Arrowsmith & Co., of London. The electric-light pendants and brackets in this room were designed and executed by the Bromsgrove Guild of Applied Arts.

At either end of the room is a panel containing a portrait in oil, by Edwin A. Ward, of a former chairman of the Institution.

A golden rope sweeps from the curtain down to the right side of the composition, at which a man—Titian-like in colour—is pulling in a vain effort to frustrate the beneficent acts of Providence.

The Evil Powers, grouped at the west end of the ceiling, are Death, Vice, Fire, and Destruction. Some are seated on the top of a column; Vice holds a silver casket, whilst Death stretches forth his skeleton fingers and clutches the handle of his scythe. Destruction, with a flaming torch in one hand, drives the Phœnix or fire bird bridled with golden chains.

The background of cloudy sky is here illuminated by the scorching glare of fire, but the clouds ascend to the peaceful blue of an evening sky, from which myriads of scintillating stars shine forth.





*Photo: Arch. Review Photo Bureau.*

THE GENERAL OFFICE, LOOKING TOWARDS THE ENTRANCE HALL.

The desks, &c., are of polished mahogany. The ceiling panels between the marble ribs are covered with mosaic. The panels or grilles at the top of the pilasters dividing the walls into bays are of ormolu bronze, and act as grilles for the fresh-air inlets. The radiator frames, seen at the floor level, are also of ormolu bronze. The frieze seen in this view shows the end of the third bay depicting "Work" (the end figure represents woman's occupation in bringing up children); the fourth panel, depicting "Courtship," "Music and Dancing," "Beauty," "Painting and Sculpture," "Peace," "The Arts of War"; and the fifth panel (on the right) representing "Charity and Temperance."

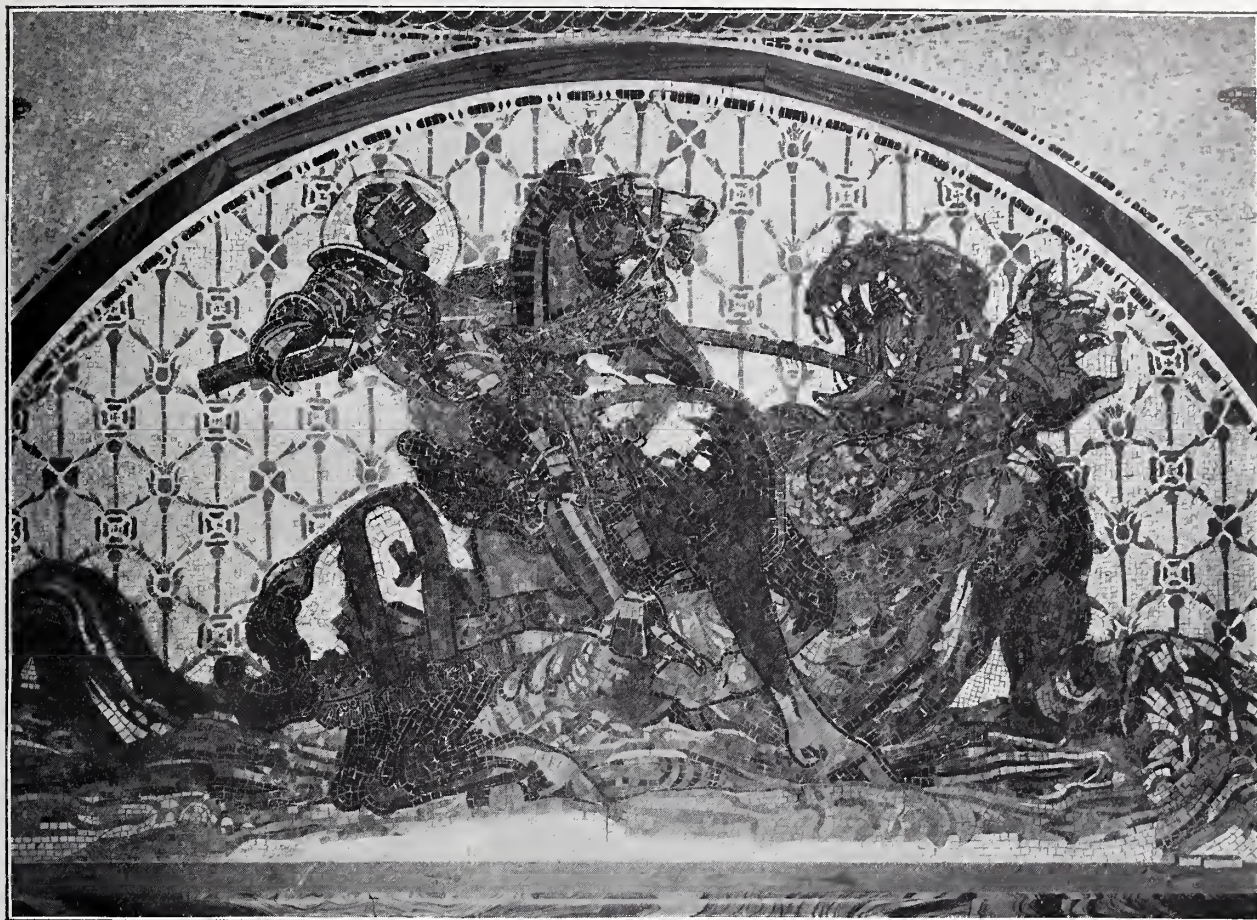


*Photo: Arch. Review Photo. Bureau.*

## THE PRINCIPAL STAIRCASE.

The staircase is lined with marble, the panels being of Italian pavonazzo framed in Greek cipollino, the cornices and enrichments of bronze being designed by Mr. F. Lynn Jenkins. The steps are of Piastraccia, the landings being of similar marble with green Tinos introduced. The ceilings are lined with very light Skyros framed in antique Swiss cipollino. The stained-glass window, by Mr. J. Dudley Forsyth, has for its subject "Providentia Tutamen," and owing to its situation of quiet reflected light is carried out in a cool scheme of colour. The female figure of "Providence" supports a child seeking knowledge; below them is a winged youthful figure of "Power," completing the composition.





"ST. GEORGE AND THE DRAGON."

Photo: Arch. Review Photo. Bureau.

DECORATIVE MOSAIC PANEL BY PROFESSOR MOIRA IN THE ENTRANCE-HALL.

The lifts have been supplied by the Otis Elevator Co., of London. The general plaster-work has been executed by John Tanner & Son, of London; and the leaded lights and casements by R. E. Pearse & Co., Ltd., of London.

The whole of the electric lighting and telephones have been installed by Strode & Co., London. The wiring has been carried out on the firm's special steel conduit system, the whole of the cables and wires being drawn into enamelled steel conduits fitted together with screwed sockets

and arranged with drawing-in and junction boxes, so that the cables and wires are always accessible. Strode & Co.'s patent flush switches have been used in all the principal parts of the building.

Messrs. Elkington & Co. executed the bronze work for the frieze, &c., from the designs and models of Mr. Lynn Jenkins and under his supervision.

The general contractors were Messrs. Higgs & Hill, Ltd.

## THE UNITED KINGDOM PROVIDENT INSTITUTION.

HENRY T. HARE, Architect.

ARTISTS-ASSOCIATE.—HENRY POOLE (statuary groups on façade), J. DUDLEY FORSYTH (stained-glass windows and mosaic ceilings), PROFESSOR MOIRA (painted ceiling and stained-glass windows), F. LYNN JENKINS (frieze in general office, architectural details, mouldings, enrichments, and decorations in ormolu bronze, and decorative panels in bronze and mother-of-pearl), F. E. E. SCHENCK (low-relief sculptures on upper part of façade, modelled and gilded ceiling to Upper Hall, and enriched plaster-work).

R. B. HOGG, Quantity Surveyor.  
JOHN DAVIS, Clerk of the Works.  
HIGGS & HILL, LTD., General Contractors.  
J. WISHART, Foreman on the Works.

### SOME OF THE SPECIAL CONTRACTORS.

J. STARKIE GARDNER & Co.—Ormolu bronze counter-fittings, general bronze work, &c.  
H. T. JENKINS & SON.—Marble-work.  
RUST'S VITREOUS MOSAIC CO.—Mosaic wall and ceiling linings.  
ALLEN & SON.—White glazed bricks.  
OTIS ELEVATOR CO.—Lifts.  
STRODE & CO.—Electric lighting.

HEYWOOD & CO.—Glass dome to General Office and patent glazing.  
BROMSGROVE GUILD.—Electric fittings in Board-room.  
W. AUMONIER & SON.—Oak panelling and wood carving.  
A. J. ARROWSMITH & CO.—Parquet flooring and special furniture.  
R. E. PEARSE & CO., LTD.—Leaded lights.  
J. TANNER & SON.—General plaster-work.

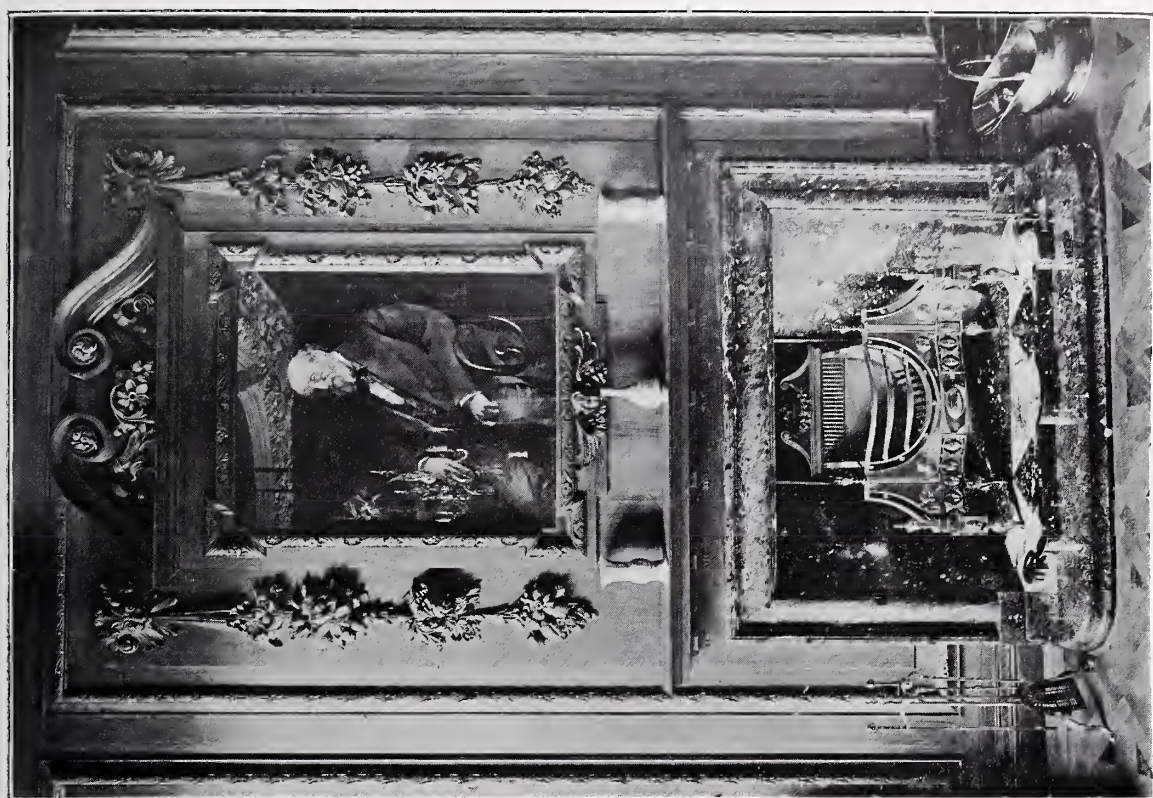


*Photo : Arch. Review Photo. Bureau.*

THE UPPER HALL ON THE FIRST FLOOR, LOOKING TOWARDS THE PRINCIPAL STAIRCASE.

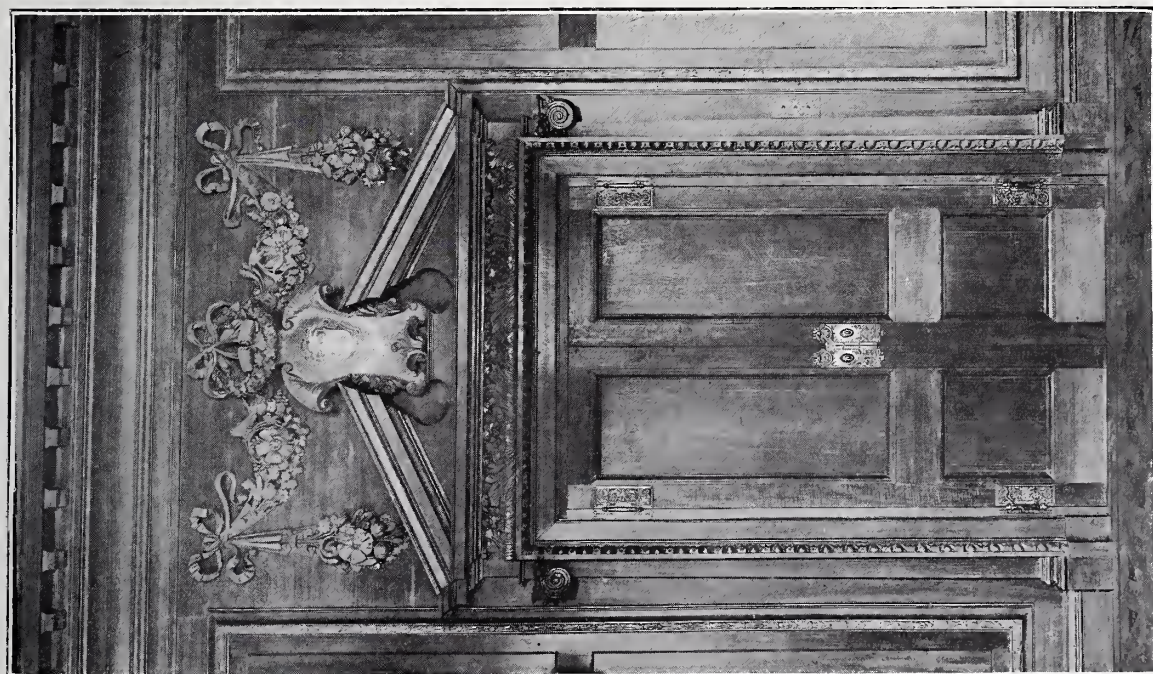
This Upper Hall is outside the Board- and Waiting-room, and has three lunette panels (one being seen in the view), with ormolu figures on a background of mother-of-pearl by Mr. F. Lynn Jenkins. Wall-linings, columns, &c., are of Irish green and antique Swiss cipollino, the large pilasters being treated with inlays of the unique blue sodolite from the Princess Quarries in Canada, named after the Princess of Wales, who encouraged their development. The floor is of similar materials to those of the General Office and Entrance Hall. The mouldings are of verd antico. The gilt ceiling to this vestibule is by Mr. F. E. E. Schenck. The small stained-glass window with heraldic design, as well as a larger one (not seen in the view) representing "Temperance," is by Professor Moira.





*Photos: Arch. Review Photo, Bureau.*

The chimney-piece. The portrait is that of Mr. Robert Warner, a former Chairman of the Institution.



One of the doors. These are carried out, like the panelling, in wainscot oak. The hinges, door-plates, &c., are specially designed and of delicate pierced pattern.

DETAILS IN THE BOARD-ROOM.



*Photo : Arch. Review Photo, Bureau.*

## THE BOARD-ROOM, LOOKING EAST.

This room is panelled entirely in wainscot; the furniture in oak was specially designed for the room, the upholstery, carpet, and curtains being of a soft green. The electric-light fittings in this room are also specially designed. A detail of the ceiling-painting by Professor Moira is given on a previous page. This painting is set in a border or frame of plaster decoration in heavy relief modelled by F. E. E. Schenck.





*Photo: Arch. Review Photo. Bureau*

THE MANAGING-DIRECTOR'S ROOM.

This apartment adjoins the Board-room, and like it is panelled in wainscot and has an enriched ceiling, and the furniture similarly was specially designed by the Architect. In the windows of this and the other rooms on the first floor are decorative leads, with the coats-of-arms of the counties and principal cities of the United Kingdom.





ST. PAUL'S CATHEDRAL, WEST FRONT.

From Birch's "City Churches," by permission of Mr. B. T. Batsford.



# St. Paul's Cathedral.



FEW things are more interesting, at least to an architect, than to trace through from their beginning the ideas and designs by means of which some great and impressive structures have been evolved.

After the fall of Rome the very great or impressive structures in which fresh feats of construction were essayed were in nearly all cases connected with religion. The examples cited are necessarily churches.

In taking a retrospective view of the buildings of note, we observe that many of them show a startling boldness of conception and execution not in the least exceeded by our greatest engineering triumphs of to-day; more especially is this the case when we bear in mind that the buildings of old were executed under difficulties with which we have not in these days to contend.

Where were the books of measured drawings to which we have access so easily; the tables of breaking and crushing weights and strains; the classified information by the study of which a clever man—for still we cannot do without him—can go “one better” than his predecessors?

We may ask, too, what easy and economical means had even our immediate forefathers of going here and there, and of studying on the spot the various problems solved in the construction of great works?

What boldness was necessary and what reliance on his own resources for the architect to design and construct S. Sofia at Constantinople! What domed buildings had he at hand to study covering even half its area?

What incredible hardihood was possessed by Brunelleschi when he undertook to cover with an octagonal dome that vast area in the midst of the cathedral at Florence—and we must keep in mind that he deliberately made the business far more difficult than need be. His predecessors had provided the space, large as that covered by the dome of the Pantheon at Rome, and, judging by the amount of abutments and the excessive solidity of the structure, it cannot be doubted that it was to be roofed over with masonry. Notwithstanding all this preparation no one seemed to know how the architects had proposed to set up this mighty mass. We see by the frescoes in the Spanish Chapel at Sta. Maria Novella what it was to have been like, and that it was to spring from a line just above the ridge of the nave roof. Brunelleschi, starting from this level, set up an octagonal

drum more than 50 ft. in height and without external abutments, and on the top of this he poised his dome—built, too, without scaffolding from the ground. What previous experience had he to go by? What previous piece of construction, either ancient or of his own time, that even approached the hardihood of what he undertook to do and did? And we still see his work standing after many hundred years have passed over it.

The most tremendous modern works of construction (it is now the engineers who do these things: we architects have quite retired into the shade), with the opportunities which the authors have of study and comparison, almost sink to insignificance beside this extraordinary piece of bold invention, designed and carried out under the difficulties of 500 years ago.

It is designing and carrying to completion some work in which a man is thrown almost entirely on his own resources that fills the mind with such profound admiration, and urges us to learn what we can of the preliminary studies made by the author or authors.

No men have exceeded in masonry construction the wonderful efforts of the French architects of the Middle Ages; but, bold as they were to hardihood, we are able to see how they developed, each man only by a comparatively small degree exceeding the ingenuity and skill of those who were either his contemporaries or immediately preceded him. But we may say of Brunelleschi that he leapt with a bound into space.

If I claim that Sir C. Wren, in designing St. Paul's Cathedral, should be ranked amongst those who conceived and carried through one of the greatest works of invention under the conditions above referred to, it may be thought that I claim too much. I hope, however, to show that I do not.

Superficial observers, amongst whom we must not include architects, often tell us that St. Paul's is a copy of St. Peter's at Rome. Nothing can be more untrue.

All great cruciform churches must necessarily have something in common, but except that each of the two buildings referred to has a dome over the intersection it would be difficult to find two churches more unlike both in plan and construction. It would be as reasonable to say that the cathedrals at Lincoln and Canterbury are alike because they each have three towers. We must therefore dismiss from our minds the false notion that Wren, in designing St. Paul's, had little more to do than to make a *réchauffé* of St. Peter's.



Perhaps the best way to realise actually what he did is for us to picture to ourselves the circumstances with which he was surrounded at the time the designs for the church were made. What were his opportunities? How much had he been able to travel and, by study of examples, to learn? On one occasion only was Wren out of England. He spent a few months in Paris whilst London was being devastated by the plague. This was the one and only opportunity he ever had to examine any buildings carried out in the Palladian manner, then so much coming into fashion, except, of course, two or three pieces by Inigo Jones at home. And what was there at that time for him to see in Paris? The only domed church of any pretensions then erected was at the Sorbonne, a very modest building when compared with the great domed structure he had soon after to design. The frigid eastern façade of the Louvre was being built, and Wren in his journals expresses his admiration for the engines used in raising the very great stones employed. Neither S. Sulpice nor the Pantheon was built. Wren states that he bought a number of *taille douce*—engravings, no doubt, of the buildings then built and building in Rome.

So he came home again equipped with some engravings and the sights of a very few specimens of the Palladian then creeping into Paris, but which, happily, seems never to have got much footing there. How different were his opportunities from those of the architects of to-day!

We must remember that Wren had already designed a central dome to be set up on old St. Paul's. In designing this he seems to have been as bold and brave in his intentions as he was after he had been to Paris. His scheme for removing the centre tower and, following the example of Ely, replacing it by an octagon, gave him a dome about as large as that he afterwards erected. The drawing (now at All Souls) gives us but a very slight idea as to how he actually proposed to construct the dome. Then came the destruction of the old cathedral and the task of designing the new. At once we are brought face to face with Wren's originality and inventive powers. In St. Paul's Cathedral there exists the model, most carefully made in all respects, of the church he proposed to erect, and which for practical reasons of use we may be very glad was not constructed. No doubt the great dome at St. Peter's had so completely established itself as the one and only central feature a big church could possess, that every scheme made by Wren always centred round this. But from what source did he get his plan? He had not Fergusson's handbook to look into, and if he had he would not have found any plan or scheme of treatment similar to that which he evolved.

As a church, even for preaching purposes, the plan is certainly bad; for choral purposes, jejune and shrivelled as the services had become in his time, it was unsuited. Unless it had been carried out at nearly twice the dimensions he proposed it would have been very inadequate for present-day uses. As an architect's dream and as a piece of ingenious construction the interior was as original as it was beautiful.

It is, indeed, well deserving of close study. As we know, Wren thought a great deal of "the good Roman manner" as he called it. And what was this? A parade of classic detail, but applied then, as it is now, without meaning; a mere surface pattern concealing and falsifying the real construction, belying the true architecture of the building.

In Wren's day the active energy of the Renaissance was still strong—the Renaissance to which we owe so much in all the arts except that of architecture. Wren must make use of the language of the day. How does he express this in words when he is called upon to make a fresh design for St. Paul's? He says that he wishes "to reconcile as near as possible the Gothic to a better manner of architecture." Architecture, according to this, must mean trimmings and not the essential anatomy of the structure to be designed.

How far does his genius bow to these false suggestions? We shall see that as we go on. A study of the first design for the cathedral shows us a building which, in the interior, divested of its trimmings, has nothing whatever about it that belongs essentially to "the good Roman manner." It consists of a most masterly arrangement of piers and arches, so placed as to be of the greatest constructive value and at the same time to produce the maximum of effect. The interior, encrusted with marble slabs and adorned with gold mosaics, instead of with many pilasters, would have very well taken its place as a building in the Byzantine manner, and a very noble one.

The exterior was adorned with the inevitable portico at the west end, surmounted by a pediment. The equally inevitable "order" was plastered on the side walls, without any relation to the interior, and was surmounted by a clumsy and ill-proportioned attic, an influence no doubt from St. Peter's.

The intercolumniations of the "order" were pierced by windows of various sizes, while the attic conveniently hid the construction of the various roofs, and of the abutments of the base of the dome. Quite, in this respect, in the true modern "Roman manner." May it not be considered that the flanks of the church in this design are even commonplace?



Then we come to the dome resting on the drum surrounded by buttresses as in the existing building. In the design of this, as in that of the interior, Wren is beholden to no man. He is all himself. The relation of the dome to the drum from which it springs and to the structure below, the relation of the lantern to the dome, the beautiful curve of the dome itself, the extreme simplicity and majesty of the whole, are most striking.

As in the existing cathedral, so to a less degree in the model, the buttresses around the drum are disguised. We may ask, Why should they be disguised at all? The answer is clear. Such things are not found in "the good Roman manner." The arches joining the buttresses are honestly displayed, and were it not for "the dead hand," as Professor Lethaby so aptly calls it, the pretence that that which is a series of arches is in fact a piece of trabeated construction propped by arches, we should find a perfectly true piece of architecture.

I think it must be admitted that in the design for the model Wren's genius proclaims itself at once as quite original and yet without effort; perhaps a little hampered by the stock pattern book, but in all essentials riding clear above it.

This scheme was not accepted. It was not found to be of the approved cathedral form, nor with its central feature sufficiently lofty to remind the Londoner of what he had lost—a steeple which had been the highest structure in the world. So, on the basis of the cathedral plan, especially English and reminiscent of old St. Paul's, viz. with an eastern limb almost as long as the western, Wren again set to work, and undoubtedly took sundry hints from Ely.

It was in preparing this second design that Wren decided "to reconcile, as near as possible, the Gothic to a better manner of architecture." We can see in the design before referred to, for a central feature to be set up in place of the great tower at old St. Paul's, how the interior of the Norman nave of that great building was to be "reconciled." He proposed to put a skin over the massive clustered columns, to place Corinthianesque capitals in various places, and to give us something which, if any merit at all had been left to it, would have been that inherent in the original building, and certainly not in the skin-deep "better manner of architecture" with which it was to be encrusted and disguised.

The treatment here proposed shows us that Wren was of opinion that architectural effect depended on "trimmings," but, happily, his acts and his words did not quite agree. The glories of St. Paul's owe little enough to this "better manner," but how much are they not owing to Wren's genius and good taste?

It is now my duty, in praise of my hero, to show if I can wherein Wren the man of genius triumphed over Wren the pedant; how, with amazing skill, he solved many difficult problems; and how much, in doing this, he must have relied on himself and on his own observations, how little upon tradition or inherited skill.

The mediæval tradition was already broken. The last big churches that had been built were, I suppose, Bath Abbey, the Chapel of Henry VII., and King's Chapel at Cambridge. I say this under correction. How different in their masonry and methods are these to the work at St. Paul's! From the first quarter of the sixteenth century to the last quarter of the seventeenth century, what a gap it is, especially at this period in our history!

Wren was a close observer, and had made careful studies of sundry mediæval buildings. His reports thereon show this. He must also have made a minute and careful study of old St. Paul's. His mind was thoroughly impregnated with the bold and ingenious methods of construction made use of by his countrymen—a boldness combined with economy of material, opposite in the extreme to the piling together of masses of masonry prevalent in and before his time in Italy.

But let us reflect for a moment on what he had to do. The site he was to build on was cumbered with mountains of material, some of it still standing, sound and strong, but built for the most part of indifferent stone, much of it damaged by fire. In the middle of this chaos he had to plant his new church. Here, at once, his invention comes in. He tilts the axis towards the north, and so to a large extent finds unbroken ground on which to plant his foundation. He examines carefully the nature of the ground and finds that the solid London clay is 40 ft. down, a depth which we may suppose was in his days looked on as quite out of the question, except under the dire necessities he was put to at the N.E. corner. He finds that the old church, an exceedingly weighty structure, had stood very well on the layer of "pot-earth" which covered a bed of gravel. If the old building stood on that, why not the new? Then his ingenuity at once comes into play. Nowadays, it is nothing to us to float heavy buildings on beds of concrete, to build in iron rods or rails or what not, or, with various means we have at disposal, to sink deep and capacious shafts here and there to the solid. Wren had to think out the whole thing, and devise his ingenious method of floating his building.

In Fig. 1 we see on plan the method which he adopted to distribute the weight, whilst the section Fig. 2 shows how the eight piers, 30 ft. by 10 ft., were steadied. The plan of the structure



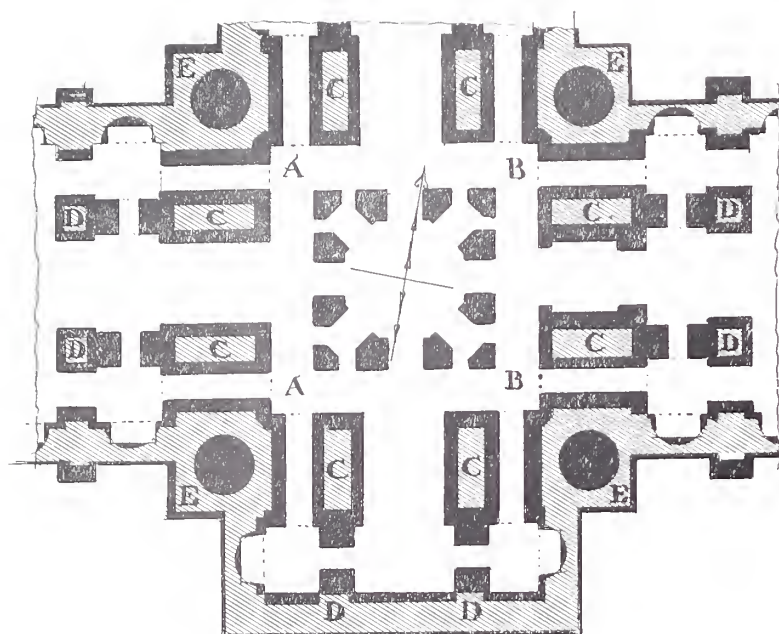


FIG. 1.

on the floor level of the church is shown in Fig. 1 superimposed on the substructure at the level of the crypt floor. The value of the conical structure can be traced in Fig. 2 even down to the lowest levels of the building.

He joins up the bases of the eight piers C C (Fig. 1), by masonry practically continuous, to the bases of the piers in the nave, choir, and transept which come near them D D, whilst he also joins these same bases C C to the bastions E E by masonry of the most solid description. He seems to have taken every precaution that nothing should slip. The very massive piers which carry the floor of the dome—far more massive than was required merely to carry the weight of the floor—seem also to suggest the idea that Wren set great value on the rigidity gained at the floor level of the church by the series of vaults in every direction which he placed there.

A glance at the section Fig. 2 shows clearly how the conical idea is carried out, how the greatest stability is gained with the least amount of material. The upper cone rests on the lower cone pierced by the windows which light the interior, and this is again spread out upon the backs of the four great arches and of the four half-domes which bear the superstructure, circular in plan, upon the base, square in plan. The weight descending vertically is borne on the piers C and spread out laterally to D.

The way in which the structure which carries the dome is spread wider and wider until it covers an area of 250 ft. by 250 is very ingenious. We know that the centre towers at old St. Paul's, as at Salisbury, had been assisted by a very ingenious engineering arrangement of flying and other buttresses. These may have given a sug-

gestion to Wren, but the way he has done the work is all his own. One cannot suppose that the *taille douce* gave him hints.

So here he has conquered, in his own way, and without previous examples, some very difficult problems. Then comes the all-important question, the dimensions of the points of support of the dome, and their materials. Granite, vitrified bricks, concrete, and the sundry and one ways and means we have at command, he neither had nor could see in use. Tables of the resistance of materials and the strengths of cements and mortars he had not. The hardest available material was Portland stone. An examination of the cathedral shows us at once the difficulties he had to overcome. The com-

mittee required something which did not depart "too far from the Gothic." They wanted, at least for the plan, a reminder of the majestic structure that was to be removed, and Wren saw at once what to do, making as he did a modification of the plan of Ely Cathedral, which, from

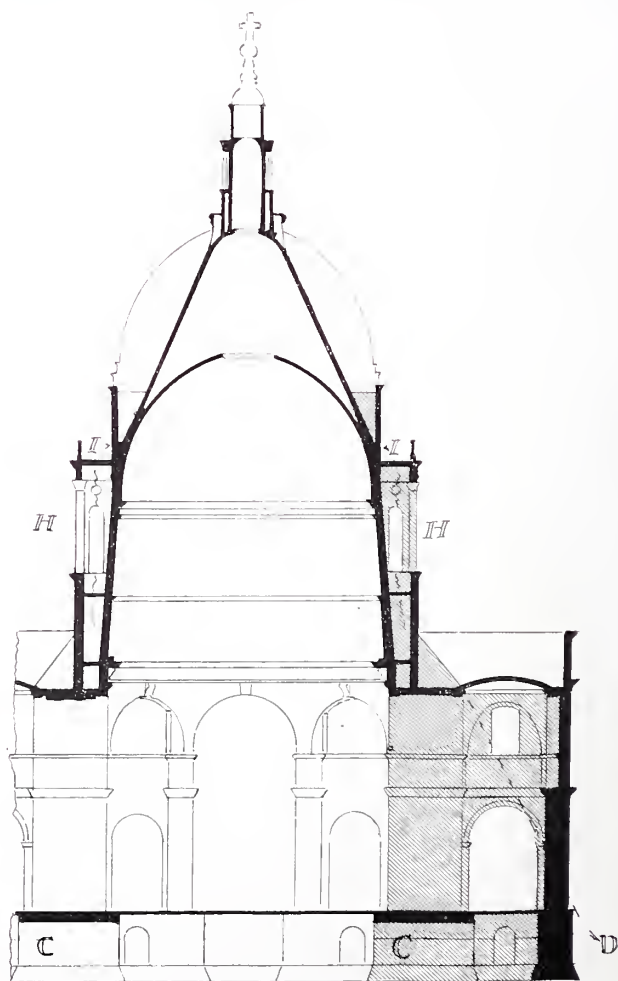


FIG. 2



family associations, he knew so well. But at Ely the octagon is vaulted and roofed entirely in wood. It rises but very little above the ridges of the roofs, and in height forms no commanding central feature. Wren was to combine space with a height sufficient to remind the world of the departed glories of the older cathedral.

Piers amply sufficient to carry the wood structure would have been altogether inadequate to support the huge superstructure he contemplated. He had to design adequate piers and yet thread through them the necessary "long-drawn aisles."

In constructing the dome at St. Peter's no such difficulties presented themselves. The plan in that church is that of a Greek cross. There is no place for long aisles or side vistas. At Florence the nave aisles are carried through into the octagonal area under the dome, but we may question whether this is done successfully. The aisles end in what is little better than a couple of tunnels chopped through the piers.

So Wren had to solve the difficulty his own way, viz. by making the eight piers rather thin but of considerable length, about 9 ft. by 30 ft., measured on the pavement level of the church. The vertical weight of the whole superstructure rests on these points of support, and notwithstanding the settlements that have taken place there are none which can be attributed to any miscalculation of strength or imperfection of construction in these piers.

These eight piers carry four great tunnel vaults, and the thrust of these vaults (bearing on their backs a prodigious weight) is carried onward in a direct line to the four bastion-like masses which form so majestic a feature in the exterior view of the church. For we must keep in view that the dome of St. Paul's rests, not on an octagon, but on a square, at the angles of which are the bastions.

The accompanying diagram, Fig. 3, shows us that in relation to the great thrust passing through the side arches FG and FG to the bastions EE, these bastions form buttresses of no great depth in the direction of these thrusts. The thrust is also received very high above the ground, and is not only in the directions above indicated, but also in an outward direction, received from the half-domes over A and B, on each of which half-domes rests an eighth part of the total weight of the superstructure. How did Wren get over this difficulty?

In showing how this was done, I shall have to speak in praise of one of those things which the critics, the superficial critics I will venture to call them, who merely look upon the surface, have agreed to condemn. The exterior of the church is decorated, as we know, with two orders of

pilasters. The upper order clothes a great wall surmounted by a balustrade, but for more than a third of its height this wall has nothing behind it, the lead roof of the triforium over the aisles being nearly 30 ft. below the balustrade.

The critics tell us that this wall was merely set up to hide the flying buttresses which resist the thrusts of the nave and choir vaults. A glance at the diagram (Fig. 3) shows that this wall has a most responsible and structural office to fulfil. The drum of the dome stands over an area that is square, AB on plan (Fig. 1). The preparation for the circle begins at a height of 65 ft. from the floor, at the level of the eight great arches. To resist the thrust of the four great arches of the crossing lesser arches spring from the same level, FG. and FG., and span the aisles (Fig. 3). These arches in fact continue the square form of plan, taking the thrust directly on to the angle bastions EE. The weight carried by each of the four great arches, an eighth part of that of the whole superstructure, is sustained by piers 30 ft. long it is true in one direction, but less than 10 ft. through in the direction of the thrust. The arches FG, FG carry on the thrust.

Wren evidently did not think the bastions EE were sufficient of themselves to resist the strains imposed on them.

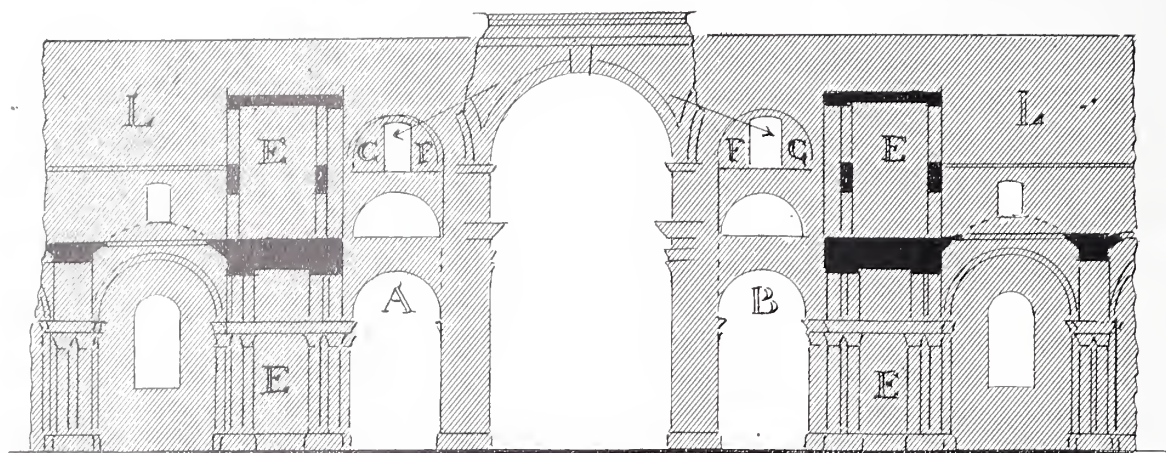
To form an idea of the immense superstructure resting on the arches we must reflect that if set up on the elevation (Fig. 3), we must add a height of more than two-and-a-half times above the highest level shown on the drawing.

The section shows us that the great piers are steadied at the level of the aisle vaults by tunnels. How solid in construction these may be we do not know, but it is clear that the most severe action of thrust does not come into operation until we reach a level of some 70 ft. above the church floor and in the directions FG, FG.

The walls, with windows in them which are shaded with a half tint, are quite thin, and have no real value in giving rigidity to the great piers.

Just as the great piers 30 ft. by 10 ft. are assisted in the direction of their length by the walls of the clerestory, so the bastions are stiffened, in opposition to the line of thrust, by those great walls, L, which assist in distributing the thrust over the largest possible area. We cannot doubt that had Wren put a sufficient mass of material into the bastions, EE, to resist the thrusts, these would have become so ponderous as, on the unsatisfactory subsoil, to have caused danger by their subsidence. Had they sunk more than the eight dome piers, what terrible results might have come about; but, designed as they are, the tendencies of the various parts of the structure are, in



FIG. 3.<sup>1</sup>

the event of subsidence, to lean towards each other, as they do in the buttresses of the drum overhead. Wren provided for that which he used his utmost efforts to avert. I must again say for my hero, that the longer one has lived in the building and examined it from every point of view, the more is one overwhelmed with veneration and astonishment at the surprising resourcefulness, originality, and prescience of that wonderful man. Whether it be to poise several thousand tons of masonry in the air or to provide for a rain-water pipe in the best way, nothing is forgotten.

Another ingenuity of construction is also well worthy of observation. This is to be found in the drum of the dome (see Fig. 2).

Viewed from the outside we see rising above the roofs a sweep of unbroken wall. This forms a base upon which stands the stately range of columns H H, which support the balustrade of the "stone gallery," as it is called. But, as a matter of fact, we do not look upon a range of columns, but upon the outer edges of a series of buttresses set at right angles with the drum. The purist must raise the objection that here Wren has used "the better manner of architecture" at the expense of truth. Undoubtedly he has, but in his masterly hands the result is so superb that we must condone the fault. The series of thirty-two buttresses are gathered into eight groups by filling in the intercolumniation over each of the great piers on which the whole mass rests. Within two of the filled-in spaces thus formed, winding stairs are taken up to the stone gallery. The other six are tall empty shafts. The stonework forming the sides of these shafts at right angles with the drum is by no means thick, not more substantial than that which forms the other sixteen buttresses. Judging by other devices used, where the drum rests on the great arches it seems to have been Wren's desire to make the

whole of the drum of equal weight in the entire circumference. The sixteen buttresses which are terminated towards the spectator by—as he thinks—sixteen free standing columns, are pierced by arches and circular holes above them. The whole of this work is executed in excellent ashlar; and all parts of the walls being comparatively thin, the stones, by no means large, are carried through. So as in all possible ways to avoid vertical joints, the section (Fig. 3) shows us the method of construction adopted. The columns of the colonnade are surmounted by an orthodox entablature; but this is entirely false, a mere screen hiding the ingenious structure behind it. The buttresses are, in fact, surmounted by a series of arches set at right angles to the wall of the drum. These, using but a comparatively small quantity of material, form a ring of great rigidity set at right angles to the thrust of the base of the cone.

It will be observed that the weight of the superstructure rests very much more on the inner ends of the eight great piers which carry the dome than on the outer ends. Wren endeavoured by various devices to distribute this weight, and probably had he been able to obtain long, hard stones of considerable size he would have succeeded. Unfortunately for him the materials at command were anything but large in scantling. Excepting the fine ashlar work used for the colonnade and buttresses, the stone used for the other parts of the dome structure are decidedly small, whilst a great deal of the work is of very good brick. The sinking of the eight great piers set up movements overhead, and in effect the whole of the drum with the inner dome and the cone over it sank, leaving behind them the outer ends of the buttresses, which we see as the columns of the colonnade. The arches before referred to, and the round holes above them, are all more or less cracked, and consequently the outer part of the

<sup>1</sup> It should be stated that Figs. 1, 2, 3 are diagrams only, but not scrupulously accurate as to scale or detail.



buttresses is separated from that which abuts upon the drum. Here we observe the advantage gained by the inclined wall of the drum, that wall pierced by windows which we see from inside the church. The section of the drum (Fig. 3) shows us that although this settlement has taken place, the tendency of the buttresses is to fall inward against the drum, and that is certainly the fact. Within the last five years every part of the drum has been carefully gone over, and all cracks and damaged stones have been repaired. Whilst the dislocation of the arches in the buttresses was very manifest, the inner half of the arch having in some cases sunk very considerably below the outer half, there were not any gaping cracks. The buttresses seemed to be doing their work perfectly well.

To increase the rigidity of the ring of arches which surmounts the buttresses and tie their outer ends—the colonnade—to the drum of the dome, Wren made use of iron ties anchored into the drum and over the columns. A little above the inner ends of these comes the “great chain” (I), as it is called in the “Parentalia,” which embraces the spring of the cone.

Wren, unfortunately, made use of iron cramps and ties in many places, following, as so many of us are apt to do, “the good Roman manner” without remembering the immense difference there is between the climate of London and of Rome.

Iron cramps stand well enough in Italy when but a very little way below the surface. Not so in England. The damp has, in the case of St. Paul's, penetrated to the cramps, and they have exfoliated in an extraordinary manner, splitting to pieces the stonework they were supposed to fortify.

Seeing how terribly the iron had in many cases acted as a destructive agent, and seeing also how exceedingly important the iron ties were which extended from the drum to the colonnade, it became a matter that could not be neglected to ascertain the condition of these ties.

I was the more apprehensive because the pavement of the stone gallery, a series of large slabs draining into a stone trough, was very much worn. The movements in the building must have caused the joints in the trough to open, whilst the slabs were so uneven, worn by the feet of countless sightseers, that the rain-water stood in pools and soaked the slabs. It was evident that water entering the filling in, on which the slabs rested, would sink between the haunches of the radiating arches above the buttress, rust the iron, and in time weaken most seriously one of the chief abutments of the dome and cone.

Some stone slabs were lifted. Underneath was a fine close bed of lime, mortar, and pieces of

stone, a species of concrete which, where we raised the stones, seemed none the worse for any wettings it may have got. The iron ties were, however, some six or eight feet lower down, so we dug through the mass. Excavation was carried on some 200 feet above ground.

At last the tie rod was reached. There it lay in the most perfect condition—almost bright. It was a matter of no little joy to see the excellence both of the bar and of the filling in—one could feel assured that the ties were still doing the work Wren had designed them for. To ensure that no moisture shall hereafter get into the backs of the arches, the stone trough is now lined with asphalt and the slabs forming the floor of the stone gallery are covered with the same impervious material.

All the iron used in the building of St. Paul's is charcoal iron—presumably from the Sussex furnaces. We see that, the air excluded, it remains in perfect condition for 200 years.

It would perhaps have been wise to search for the “great chain” and to ascertain its condition, as it lies comparatively near the outer surface of the attic wall above the colonnade.

Mr. Penrose had told me some time before that in carrying down the circular stair at the N.E. angle of the choir so that instead of going merely into the churchyard it gave access to the crypt, he found the heading of the wall to be composed of many stones from the old cathedral set in lime mortar, admirably compounded, which he compared with the mortar found in ancient Roman buildings. It was through such well-compounded material that we excavated to reach the iron ties.

Wren had been told by his Committee that they wanted a building which did not depart too far from “the Gothic.” Except the cathedral at Bristol all our cathedrals have a lofty nave and low aisles, as had old St. Paul's. The great triforia, practically an upper aisle, so common in Norman churches, did not suggest to him a way out of his difficulty.

Wren had not seen some of the great churches of Spain, where, as at Malaga, Diego de Siloe has, with Italian detail, given us a Gothic church with the aisles as high as the nave. Retaining every part which he felt to be essential to stability, Wren could have very easily roofed in the space which is now a mere well to light the clerestory window, and he need not have departed far from the “Gothic” as understood by his Committee.

He required his continuous abutments, and we may be thankful that, at least for external effect, he provided them as he did.

The tremendous mass of masonry, fully 100 ft. in height, as seen from the churchyard, and pierced by so few openings, forms a most fitting

basis for the glorious superstructure. Whatever its faults may be it remains more majestic and glorious than any similar structure whether built before or since.

If we compare Wren's method of building the great central feature of St. Paul's with that employed at St. Peter's at Rome, the only rival he had, we shall find that the difference could hardly be greater.

It is evident that Wren was a close student of the great mediæval churches of England, and in these he found most excellent examples of scientific construction, combined with remarkable economy of material. We learn in the "*Parentalia*" that he thought the builders of the Middle Ages little better than barbarians; but he did not hesitate to use their methods, and, in result, his great masterpiece is built in all respects completely on mediæval lines; not in plan only. It is, however, disguised as far as possible beneath a trimming of "*the good Roman manner.*" Wren was in difficulties about his west front. A portico or protection to his great doorway seems to be a necessity. In his earlier plan he proposed to erect a portico of one very large order of Corinthian columns, rather a dull-looking affair, judging by the model. He found, however, that he could not get from Portland stones of sufficient size to give him drums for these large columns; and here, at once, his care for good construction comes to the top. He knew how undesirable it was to have vertical joints in a column, so he adopted the only course open to the true architect: he suited his design to the materials he could obtain. The largest stones he could get gave him columns of 4 ft. in diameter, and these he used. But his façade was 100 ft. high, so he thought the matter out for himself, threw the copy-books and the "*dead hand*" to the winds, and designed the exceedingly magnificent façade we now see, and which has, of course, been severely pulled over the coals by those dreary critics. The grouping of the columns and general treatment is surely abundant evidence of the resourcefulness of Wren, and whence did he get his suggestion for such a design except out of his own head? The difficulty is triumphantly overcome.

Then it is said the side chapels, one behind each of the towers, were forced upon him by the Duke of York. Satisfactory evidence for this I have not seen, nor, excepting in the way the chapels absorb the lower stories of the western towers, do they appear like afterthoughts. If the statement be true we can but admire the magnificent internal effect which our architect obtained, by widening the first bay of the nave and combining with this the arches, columns, and screens of the side chapels. I venture to believe that no building whatever has a more nobly designed

entrance than St. Paul's. Wren mastered the difficulty and turned it into a triumph.

Notwithstanding the horribly coarse and vulgar architectural trimmings in St. Peter's, we must admit that, in general proportions, the interior is superior to that of St. Paul's, but it has nothing to put beside the western vestibule and chapels. I venture to affirm that all the best features of the interior are seen where we find Wren thinking for himself and designing what he wanted, and not making use of what he found in the pattern books. To the western bay and vestibule we have already referred. The inevitable "*order*" with its cornice is plastered on the inner face of the piers, and goes far to ruin the effect of the eight great piers of the dome. We are asked to believe that the vast superstructure is poised on eight equal arches which rest on eight columns only 4 ft. wide and are folded up the middle. But if we examine the treatment of the piers of the arcades, omitting the great pilasters, we find that Wren has thought for himself. He keeps the surfaces of them, masses of masonry 8 ft. square on plan, very flat. The bases on the floor are not broken at all, the surface pilasters have but little relief, and above the capitals he draws the whole thing together once more by a simple cornice—not in the books—which is as unbroken as the base, except by the useless pilaster which, with the pennyworth of frieze, looks singularly weak and out of place. The "*style*" was too much for him when he got to the apse. I am unable to recall a single instance of an apsidal end with windows which "*in the better manner of architecture*" is successful. The untractable lines established by the trimmings of useless pilasters and entablatures have always beaten the architect, and at St. Paul's the strange way in which, on the exterior, the real windows are seen emerging from below and trying to get themselves into the openings provided for them is in no way successful, whilst in the interior the sudden drop of level from the clerestory windows to those of the apse is equally unfortunate.

To return to the outside, it will be found that Wren was very free in dealing with the two "*orders*" which overlay the walls. The frieze and cornice of the upper order he quite takes possession of and throws it into the cornice of his great walls. He does the same with the entablature of the upper pediment, and, be it observed, these pediments are not great constructive members used merely as an ornament, crawling aimlessly up a wall: they are what their originals were—real gables.

Where did Wren get the suggestion for the masterly design of the western towers, so beautiful in their variety of plan and juxtaposition of line,



so wonderfully adjusted to their place and to contrast with the vast majesty of the dome behind them. How much bigger they are than anything he had designed before, and yet how right they look! The same remarks apply to the dome. Compare the subtle curvature of Wren's dome with that of the painful eruptions which have of late been forcing themselves upon the sky line of London in all directions. One may invite the reader to observe how easy it is to get wrong by asking him to compare Soufflot's dome of the Pantheon at Paris with Wren's at St. Paul's. Wren had very much studied the outline and effect of the dome of St. Peter's. There are several drawings extant which prove this, but neither in the model nor in the actual work did he find that this type was suited to his needs. His dome was to be a much more imposing crown in relation to the whole structure, so he thought out something he felt to be more appropriate.

Soufflot had Mansard's beautiful dome at the Invalides and Wren's at St. Paul's to study, not to mention St. Peter's. He took parts of Wren's design, a colonnade with an attic and the cupola above, and what a poor feeble caricature he produced! At St. Paul's Wren plays freely with the types of the capitals to the dome colonnade, departing altogether from the book, and when he comes to the top of the dome, to the great stone moulding which crowns it and carries the "Golden Gallery," he runs off quite on his own account. This moulding is a tremendous thing close at hand, but how exactly right it looks from below, neither too coarse nor too small. The more one studies the graces and beautiful outline of that wonderful structure, the curve of the dome, the strong horizontal lines with which he binds it together at the spring, the noble dignity of the colonnade, with its unbroken entablature sweeping round, the subtle variety in the lanthorn (which in true elevation is surmounted by a dome of very odd shape, but just right up there), one is forced to appreciate that Wren was indeed a very great artist, an architect in the fullest sense of the word, for he not only had unlimited resources in himself in overcoming constructive difficulties, but he accomplished his end by means that were nearly always beautiful in result.

When we examine a ground plan of St. Paul's Cathedral showing the church at the floor level, we get but an imperfect idea of the way in which Wren spread out the substructure so as to float the building on the largest area of the thin stratum of "pot-earth" on which he was compelled to build. To appreciate his care, we should, having examined the floor plan of the church, proceed to study that of the crypt 20 ft. below it, and at an average level of six or seven

feet below the churchyard, and then appreciate that in most cases there are stepped footings which spread over an even larger surface. (See Fig. 1.)

The plan under the west front at the crypt floor level shows an extraordinary mass of material, more than seems necessary for the work as executed, for we find nearly the whole space under the void of the portico a solid mass of masonry. This is, however, to be explained from the fact that at one time Wren had proposed to place columns within this portico dividing it into a nave and aisles. There are drawings in the cathedral which show this. On this great mass of material stands at the north and south end a tower, 40 ft. square at the base, and rising to a height of fully two hundred and fifty feet above the lowest course of these footings. Between the towers is the void of the portico.

The footings of the towers are spread out with many steps; but notwithstanding the precautions taken, they have each of them sunk, and in so doing have spread outwards; the north tower but very little, the south tower so much that it has a distinct inclination towards the south-west.

The west wall of the church, or back of the portico, which is pierced by the great doorway and window above it, has split in half from the top to the bottom. The horizontal door-head gives but slight indication of the movement, but the window-head above has suffered seriously, as shown by the photographs (Figs. 4, 5, and 6).

As we ascend the great flight of steps which leads us to the portico, we may observe that they are not horizontal, but are laid on a curve, the centre rising above the north and south ends. The plan and arrangement of these steps (except the curved surface) are such as was originally intended by Wren. They are thus shown in his drawings preserved in the cathedral, but were not so carried out, as after he had faithfully served the church for forty-eight years he was turned out of office, and a perfectly ignorant person—one Benson—was put in his place. Under Benson the steps were finished, not following Wren's design.

About thirty years since the heavy cast-iron railings with which the area before the west front was enclosed were removed and the space thrown open as we now see it, and at the same time the great flight of steps, which stood in need of repair, was reconstructed, following Wren's own plan.

I had supposed that, possibly, the subtle curvity of the surface had been made by Mr. Penrose, remembering the beautiful effect of the same treatment which we see in the Parthenon at Athens.



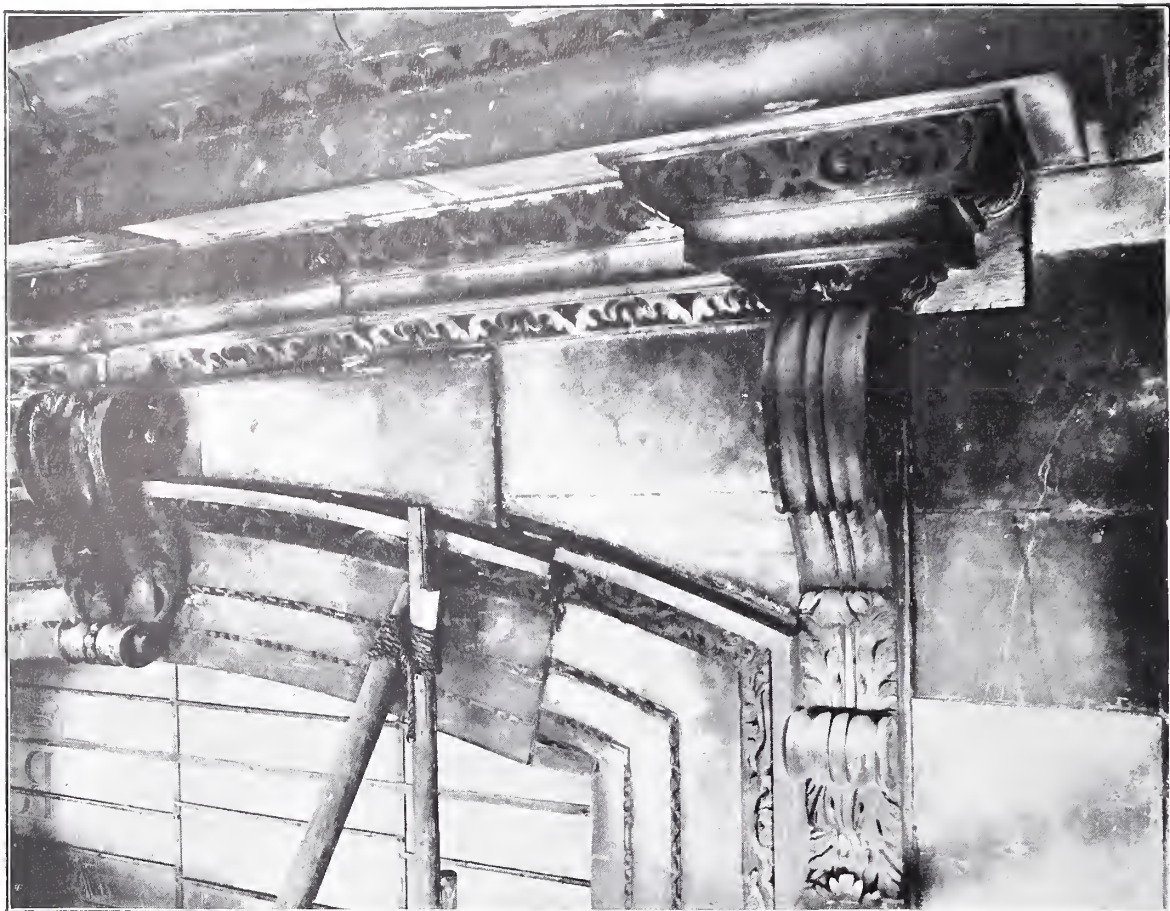


FIG. 4.



FIG. 5.

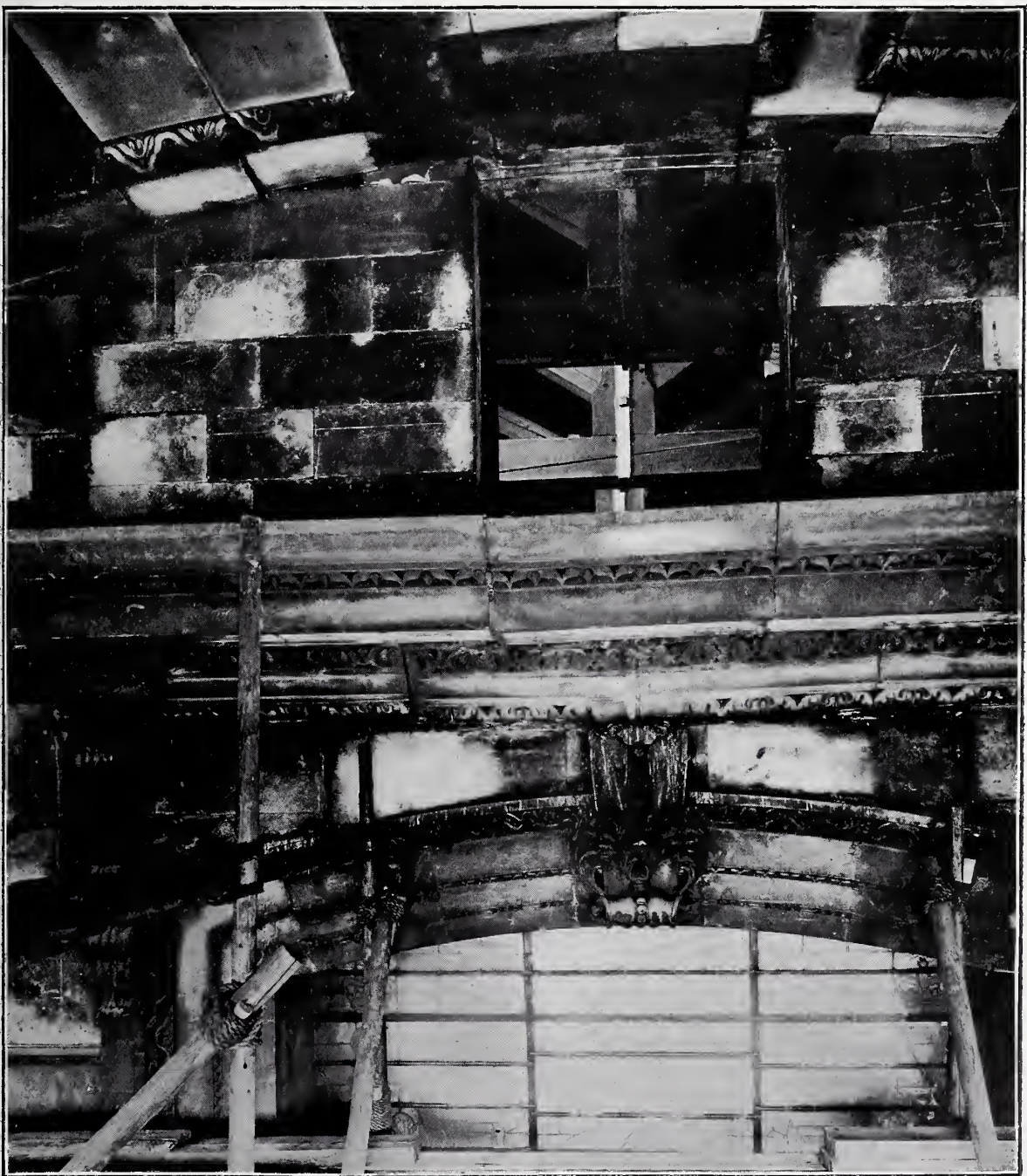
*Photos: Arch. Review Photo. Bureau.*



Mr. Penrose told me, however, that the curvature was of necessity. The two ends of the platform having gone down, he found himself in the following dilemma: If a horizontal line were taken from the north to the south end of the platform, adopting the datum given by the doorways into the aisles, he found that the square bases on which the central columns of the portico rest would have stood up some inches higher than those at the ends. If he adopted as a datum the floor level given him by the central columns of the portico, a horizontal line would have gone far to bury the bases of the columns at the north and south ends. So he made the platform and steps follow the line of curvature caused by this

settlement, whereby all the bases and door sills stand in their true relation to the platform above which they rise.

The reader will be able to appreciate by personal observation how far the west front is from level even as near the ground as the floor line. The south-west tower shows, when examined from within, that its angles have sunk very slightly; there are dislocations to be seen partly through the sinking of the corners, but the chief movement has evidently been that of a bodily descent of the whole mass which has caused this considerable movement in the adjacent structure—one through the chapel immediately east of it, the Chapel of the Order of St. Michael and



*Photo: Arch. Review Photo. Bureau.*



St. George; the other, already referred to, through the west wall of the nave.

The dislocation in the chapel can be traced down to and below the church floor. It passes through the sill of the window. It has given rise to a curious dislocation, very perceptible in the middle of the vaulted ceiling. From the churchyard this movement can be clearly traced for its whole length. In the library above the chapel the results of the descent of the towers are equally visible, both in the south wall and in the vaulted roof. There is every appearance that this movement began and took a very manifest shape long ago. The question is now whether there are not evidences of fresh danger. As of the dome piers, so of the walls of the cathedral at the places now under consideration, there is nothing to show that the structure is at fault. The evil is clearly below the footings.

The portico of the west front, rising as it does in two stories, is covered at each level with a coffered vault of Portland stone, about fifty feet in span, but not rising above the springing line more than some eight feet (see Fig. 5). There are thus two very flat vaults sustained by thrusts against the structures north and south of them. As might be expected, the upper vault has shown very much greater signs of dislocation and movement than the lower. Whilst the lower springs at a level of some forty feet from the church floor, the upper springs at a level of about eighty feet. Whilst the lower vault is to some degree steadied by the brick walls which lie on the back and carry the pavement of the upper portico, the vault of the upper portico has only to carry itself, and is in no way steadied by any superincumbent weight. The photograph (Fig. 5) gives but a slight idea of the dislocation that has taken place. As these vaults stand quite independently of the walls at their sides, and form an integral part of the structure at the springing line only, the stones of which they are formed—of about eighteen inches in thickness, with coffers sunk out of that thickness—were free to move, and had taken great advantage of the freedom. Walking over the back of the upper vault one could see through the crack between it and the back of the pediment. The stones had moved, some settling on the line of the long axis of the curve, but others in a far more perilous way had settled on the transverse line. A rule could be pushed between many of the stones, whilst at the joints the soffit of one would be more than two inches below that of another, the voussoirs being held in place by pinching at the extrados and not at the intrados. This, of course, shows that unintended thrusts were being exerted against the back of the pediment on the west and the wall over the west

window on the east. This wall was a poor flimsy piece of construction, remarkably unlike that to be found in most parts of the cathedral. It was to be wondered at that the thrusts exerted against it by the dislocated vault had not caused it to yield. Had it done so, the arch must have collapsed. The pediment, perilously balanced on the top of the two stories of columns, and already showing a slight inclination to move westward, was equally ill suited to resist a thrust never contemplated by the architect.

Figs. 4 and 6 show how considerable have been the dislocations consequent on the west wall of the church being cracked through.

The voussoirs of the window arch have, some of them, descended bodily. The heavy and far-projecting cornice which rests on this arch has sunk. The centre stone of the cornice was very insecure, as it had but very little counterpoise over the tail, there being a doorway over the window through which we look in Fig. 6.

The arch stones and those above them have all been reset; whilst the vault, by sawing through the joints and wedging between the stones, has been got accurately into its old position, tied together across the springing line by heavy 3-in. rods of manganese bronze—a material which will not be affected by the foul atmosphere the Londoner delights to breathe.

Reference has already been made to the southwest tower, which, although it has moved, seems in itself perfectly solid.

The following facts are, I venture to think, a pretty good proof of this. Just above the level of the clock face hangs Great Paul, which with the metal collar in which it is suspended forms an oscillating mass of metal weighing about twenty tons. The bell is hung very high in this collar, so that the weight of the lower part of the bell is to a great extent balanced by the weights of the upper part of the bell and the horseshoe collar to which it is fixed. The bell is swung daily, and is raised until it is nearly horizontal. It swings east and west. The bell frame consists of a great cage of wood and iron carried some distance down the tower below the clock face. This frame lies east and west. Here we might fairly think is an engine especially devised for trying the stability of the tower, and for driving further towards the west that which already overhangs somewhat. Immediately under the bell, and nestled between the deep girders of the bell cage, is set the clock, which rests on rolled joists separate from the bell cage, but not at a lower level. The pendulum of the clock swings east and west. If the tower oscillated when the bell was swung, the clock would infallibly tell the tale, but there is no tale to tell. The clock goes calmly on its way, and



keeps admirable time whether the bell is rung or not. I believe a better test of stability could not be devised. For more than twenty years the bell has been swinging.

It has been stated that the north-west tower has also moved. There are cracks through the north-

west chapel and the room over it, but not on so large a scale as those behind the south-west tower.

In the north-west tower hangs the peal of twelve bells, the tenor weighing not less than 62 cwt. It is probably the heaviest peal in existence. We all know how often the ringing of bells in peal has proved most destructive to the towers in which they hang, and have no doubt, most of us, felt the considerable oscillation to which a bell tower is subjected—a thing not necessarily harmful.

When the bells were in full volley I took a mirror to the highest accessible part of the tower, and setting it securely on the stonework projected a ray of light on to the north face of the opposite tower, a distance of a good 100 ft. Not the least vibration could be felt, nor did the ray of light tremble or show any sign of movement.

From these tests we are surely justified in believing that the towers themselves are perfectly sound and capable of doing all the work that is laid upon them; that the movements we can see to have taken place are all from below.

In view of the great precautions which Wren took, as has been shown, to ensure the steadiness of the great piers and to avoid the chances which he foresaw of a possible side slip, it is surely very unwise, if one may not indeed say reprehensible, to admit graves to be dug as they now are between the piers, and going down, as they must do, as low as if not even below the bottom of the footings. From the very nature of things the graves have to be dug in a hurry. Digging a hole and lining it with good brickwork surrounded by concrete—and that is always done—does not tend to increase the solidity of ground. In result, there are certain lumps of concrete dotted about here and there in the earth which lies between the footings of the piers and walls. The concrete is pinned up close against the footings except by chance, not in a continuous line of hard and solid material carried from pier to pier.

It is useless to point out an evil and not suggest a remedy.

The remedy now suggested is, selecting suitable places in the floor of the crypt, to build beforehand, in vitrified bricks and surrounded with cement concrete, a complete series of graves in a row extending from pier to pier or wall to wall. These firmly imbedded in concrete and pinned up against the footings would make a solid block and would certainly render the substructure of the Cathedral more solid than it ever has been.



THE SPREAD OF THE DOME SUPPORTS.

SOMERS CLARKE.

# Books.

## OLD HOUSES IN EDINBURGH.

*Fifty-four Drawings by Bruce J. Home, reproduced in collotype with descriptive notes and introduction by Professor G. Baldwin Brown. 15½ in. × 11 in. 24s. William J. Hay, Publisher, Edinburgh.*

AFTER forty years of patient work Mr. Home has completed his fine series of records of lost and perishing Edinburgh. It would be almost necessary to set up an *apparatus criticus*, such as is beloved by scholars, if one wished to examine in detail the many methods of draughtsmanship which Mr. Home has employed, for his touch varies greatly. There are, however, two outstanding characteristics: fidelity in detail, and a masterly handling of shadows. Outside these limits the drawings range from studies of the utmost brilliance, full of cold Northern sunshine, such as those of the interior of Brown's Court to the north, and the back of Bakehouse Close looking northward (both in the first series), to the other extreme of a flatness almost pallid, such as the picture of Hope House in the Cowgate.

Through all the drawings there is a feeling of pious attachment to the truth: if Mr. Home sets down naught in malice, he at least extenuates nothing which a less honest pencil might ignore.

Much of old Edinburgh is frankly slum, and some of the drawings are quite brutally frank, as indeed they should be, for the collection is destined to be of real future antiquarian, as it is of present great artistic, value. One feels that Ruskin and Twopeny would have taken equal delight in the sound technique and the patience of it all, so far removed from the splashy or scratchy mannerisms which too often masquerade as clever draughtsmanship.

As to subjects, one is led through delightful byways of both local and national history, we renew acquaintance with that enchanting scoundrel Deacon Brodie, and are reminded by the pictures of Lady Stair's House, not only of the wonderful social achievements of that great Scots lady, but also of Lord Rosebery's recent generous gift of the house as restored to the City of Edinburgh. The notes prefacing each picture are interesting without being garrulous, and are printed in immense type which is a joy to read, and with colossal initial letters which add to the decorative character of the book. The introduction contributed by Professor Baldwin Brown very rightly draws attention to Mr. Bruce Home's "competent structural knowledge," and if one feels that the artist must sometimes have wearied of his own amazing accuracy, even if one has an occasional sense of the "bitty" (a vulgar word, but not unexpressive), there remains deep gratitude for the architectural feeling which permeates these wonderful records of a great historical city, now falling all too rapidly before the pick of the housebreaker.

The controversy as between draughtsmanship and photography is old and perhaps futile and needless, but many of the claims of the protagonists of the camera would fall flat, had all artists the inspired accuracy of Mr. Home.

John Knox's House, where Mr. Hay publishes the book, naturally figures in the series of drawings, and on paper, as in its native stone, is an abiding delight.

## THE PEACE PALACE DESIGNS.

*The Palace of Peace at The Hague. The 6 premiated and 40 other designs. In 8 Parts. Parts IV. and V. 10s. 6d. net, each.*

WE have received Parts IV. and V. of the Reproductions of Designs in the Peace Palace Competition. These contain two of the designs sent from England, viz., those by Mr. Jan F. Groll, of London, and by Mr. J. Coates Carter, of Cardiff. Among the other designs published in these parts are those by Mr. Eduard Cuijpers, of Amsterdam, M. Felix Debat, of Paris, and Mr. E. Saarinen, of Helsingfors.

## THE ART AND CRAFT OF GARDEN-MAKING.

*The Art and Craft of Garden-making. By Thomas H. Mawson, Hon. A.R.I.B.A. Third Edition, Revised and Enlarged. Pages xx. 310. Illustrations 262. 13 in. × 10 in. 35s. London: B. T. Batsford.*

IT is not often that a reviewer can give so hearty a welcome to a new edition as in the case of Mr. Mawson's book. Not only is the letterpress greatly increased, but the illustrations have leapt from 178 to 262, and their quality has greatly improved. Time is on the side of the garden architect, and Mr. Mawson is now able to reproduce photographs of gardens in being, which in earlier editions were not mature enough to show a proved success.

There are also three garden schemes now illustrated for the first time. "A Warwickshire Garden" is an excellent example of straightforward formal design, full of pleasant features, but unaffected. In "A West Country Garden" Mr. Mawson had the advantage of working in close relationship with Mr. Dan Gibson, who was the architect for the remodelling of the house, and the result is harmonious and interesting. The plan of the garden is markedly irregular, due to variations in levels and the large number of buildings set at all angles. Mr. Mawson has made great play with terraces and long flights of steps, and a thatched summer-house in a walled court is a very attractive feature.

The most notable accession to this edition is, however, the garden at The Hill, Hampstead, the residence of Mr. W. H. Lever, M.P. The work has been done very rapidly (Mr. Mawson seems to hint discreetly at an impatient client), but already the gardens begin to mature, and the photographs do not suggest that they are little more than a year old. The pergola is massive and spacious, and when the creepers have had time to spread, should be a miracle of greenery for a London suburb.

Amongst other gardens of which new photographs now appear are those of Foot's Cray Place and Wych Cross Place. A fine stone seat at the latter is happily reminiscent of the splendid example at Wilton.

Altogether, the increasing number of architects who attach great importance to garden design and equipment are thrown by this edition into deeper debt to Mr. Mawson, whose immense practical experience gives to his views a peculiar authority.

Mr. Batsford has produced the book in his usual lavish way. The big pictures by way of end-papers are a distinctly happy idea, and the cover design is a great improvement on the last edition. Where everything that makes such a book valuable is gathered together, criticism loses (and we wish it to lose) any sting, but one bone must here be picked with Mr. Mawson. If he would pay more attention to the literary side of book-making, the book would be greatly more readable. We have shed tears over infinitives remorselessly split, and over words which are caricatures, like "viewly." Here is a baffling sentence: "The demands of legislation impelled Mr. Lever to purchase and transform this mansion," &c. Our first impression was that a Utopian Government had passed an Act bidding Mr. Lever spend his princely fortune on making beautiful gardens. Doubtless Mr. Mawson means that Mr. Lever has to live somewhere in London in order to attend Parliament, and cannot live without a garden, but he hardly says so.

In the preface acknowledgments are made to Mr. C. E. Mallows and other *Misters* for their perspective views, &c.; while it is to Joseph Brown, *Esquire*, B.A., that thanks are given for "reading over my MS." This seems to the casual observer invidious, and we cannot congratulate the esquire in his character of literary sleuth-hound.

But this is, of course, a detail, and we are really delighted with the book, which is a necessity for every architectural library.



THE ARCHITECTURAL  
REVIEW, OCTOBER,  
1907, VOLUME XXII.  
NO. 131.



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# Notes of the Month.

*Excavations at Corbridge—Monksbarn, Newport—Speeches at the American Institute Jubilee Dinner—The Quebec Bridge Disaster—An Original Gothic Model—The Acton Council and its Competition—More Styles—Crosby Hall.*



SOME particulars have now been furnished of the excavation works in progress at the village of Corbridge on the Tyneside, which was once the site of the Roman town of Corstopitum. From the latest evidence it is fifteen and a quarter centuries since that town was abandoned, at the time when the conquering Roman colonists were recalled to defend their mother country from the advancing Goths. Quite recently it became necessary, in writing the County History of Northumberland, to deal with the Corbridge district, and it was felt that it could not be thoroughly done without some exploration being made of this buried Roman town. A committee was consequently formed, and a fund started for the purpose of excavating the site and laying bare the foundations of the deserted town, with the object of allowing the stones themselves to record the hitherto unwritten history of the place. His Grace the Duke of Northumberland became president of the committee, and it was estimated that £2,000 in money and five years in time would be necessary to thoroughly do the work. This year, the trenching has covered about two and a half acres, and the total area of the town is reckoned to be about thirty acres. Mr. W. H. Knowles, F.S.A., of Gosforth, the honorary secretary and a well-known architect and an ardent archæologist and antiquary, will be glad to receive sums towards the cost of completing the work. The owner of the ground under which the site of Corstopitum lies is Captain J. H. Cuthbert of Beaufront Castle, and he has given his consent to the work, and is an active supporter of it. The work is being carried out on strictly scientific lines, and this year it has been under the charge of Mr. C. L. Woolley, B.A., of the Ashmolean Museum, Oxford, assisted by Mr. R. H. Forster, who, we understand, will probably superintend next season's work. Mr. Knowles has also been able to be there about three days each week.

The special interest in these excavations is that Corstopitum was occupied in Roman times not as a fort, like Housesteads or Chesters, but by some form of town. Of such a civil town we have no vestige north of York and Aldborough, save, perhaps, at Carlisle, near the west end of the Wall. But Roman Carlisle lies beneath the

houses of a modern city, and cannot be excavated. Corstopitum, on the other hand, can be entirely uncovered, and the nature of the site promises results of unique interest.

Under the Roman strata has been found a Neolithic stratum, from which flint chippings and small flint scrapers have been taken. This lends support to the theory, which had previously been held without support, that there was a British settlement there prior to the Roman occupation. The stones of which the Roman town had been built have been traced to a little south of the Tyne, and some to near Portgate. Also, the time at which the Roman evacuation took place has been approximately fixed by the finding of coins in a potter's establishment (from which a large amount of fragmentary pottery has been recovered)—the contents of a till being found and examined. The place had been burned down at the end of the occupation, and there was a layer of burnt stuff six or seven inches thick in which a tremendous mass of pottery was unearthed. The till and coins being there, they were able to date the pottery fairly accurately, and to upset by nearly 200 years the accepted date for it. The Romans carried on the manufacture of that red pottery for nearly 200—certainly more than 100—years later than anybody had hitherto thought. Above a plinth in the gutter of the roadway at the two adjoining houses a heap of 300 or 400 minimi were found, these being the smallest Roman copper coins. They had probably been dropped there in a bag when the place was evacuated. All the coins were of the fourth century A.D., mostly of the time of Constantine, the latest date being 383. The remains of the north abutment of the bridge, leading to the main road north, called, in the middle ages and down to a couple of centuries ago, Dere Street, probably ran along the western outskirts of the town, with gateways from it leading into the town. The next point of interest is a large building with terraces behind it, built on a projecting cliff some 15 ft. high. In a cement cistern at the back, a carved stone lion, which had been used as a fountain, was unearthed, it having apparently been thrown there with other unconsidered rubbish. Here, as elsewhere in the excavations, were found floor levels of two and sometimes three different periods of construction. The later periods were always inferior in workmanship and material to the earlier. A coin found

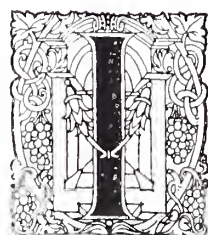
between two floor levels in this house was of the time of Carausius. It is interesting to note that some of the walls of the house were of lath and plaster. On the brow of the hill the Roman strata are lost—wiped away by weather or the operations of agriculture—and do not re-appear till the summit of the hill is passed, except where rubbish pits have been dug, and from these some very interesting curios have been obtained.



AN interesting parallel to Alston Court, illustrated in our May number, is, as a correspondent points out, the Monksbarn at Newport, Essex, a photograph of which we reproduce. Here we find the same herring-bone brick filling between the timbers, and a similar treatment of the ends of the beams carrying the upper storey and of the oriel.

The Monksbarn is reputed to have been a cell of the Royal Abbey of Westminster, which owned the great tithes of Newport. It has unhappily not come under Mr. Charles J. Blomfield's careful hands for reparation. Some few years ago it was repaired externally, but also and unfortunately it was divided internally into a pair of cottages, and we understand that a fine timber gallery was then dismantled. The carving under the oriel window is of great interest. It represents

the Virgin crowned, supporting the infant Saviour with her left hand and bearing a sceptre in her right. On each side is an angel, one harping and the other playing a little organ of eight keys. It is not impossible that this work may have been done by one of the craftsmen of the Abbey with whom Mr. Lethaby has made us acquainted. The building is probably of Edward the Fourth's reign.



IN our March issue we gave a few bons-mots from the dinner in celebration of the fiftieth anniversary of the foundation of the American Institute of Architects. Following we give some further extracts from speeches made at this dinner. Not only is the average American an excellent after-dinner speaker, but the United States seems to be more blessed than we are with public men who take a reasonable and intelligent view of the arts and of the aspirations of the modern architect.

HON. ELIHU ROOT, in proposing the health of The Ladies, said: "I know that there are in this assemblage of architects many men who feel a sense of their own inferiority to the women for whom they have been building houses; and in that I confess my own sense of sympathy and brotherhood with you dear ladies. There is not



MONKSBARN, NEWPORT, ESSEX.



one of these gentlemen who knows where a broom closet ought to be put in a house." (Laughter.)

SENATOR HENRY CABOT LODGE: "I have tried to get assistance, and I have had suggestions made to me. Mr. McKim told me anxiously that he was glad I was going to speak, and asked me what I was going to talk about. I said, 'Architecture, I suppose.' He said, 'Oh, don't talk about architecture. Talk about architects.' This the Secretary of State was unkind enough to declare was equivalent to saying, 'Talk about something you understand.' (Laughter.) But if I should talk about architects, it is possible that my remarks might degenerate into a commination service; for, as you remember, when Lord Macaulay was a small boy, the nursemaid having disturbed a little garden which he had laid out for himself, he said: 'Cursed be Sarah, for it is written that cursed is he that removeth his neighbour's landmark.' I then asked my friend, Mr. Thomas Nelson Page, what I should say. 'Oh,' he said, 'if you have not thought of anything, repeat the speech you made in the Senate the other day.' I agreed with him it was a very good one, but I did not think it would do. I then asked Mr. Hopkinson Smith what I should say. He is to follow me, so it is perhaps advisable that I should say as little as possible on the subject. He said: 'Say anything you please.' Well, if I said everything I pleased about architecture and architects I should take a good deal of time and grow unpopular. So I feel a little adrift, and I have thought that perhaps what I did say I might treat as a distinguished impressionist painter treated a picture when he showed it to a friend who admired it and then asked, 'What is it?' 'Well,' the painter replied, 'I painted it as a sunset, but I have changed my mind since, and I think I shall exhibit it as a portrait of my mother-in-law.' (Laughter.)

"If what I have to say does not answer to the toast, why, then, we will simply call it something else. I shall disobey Mr. McKim's unkind suggestion that I ought not to talk about architecture. I shall speak of it, not from the professional point of view, but from the standpoint of a student of history, which I have been for many years in a humble way, because to me as a student of history architecture has been a great teacher. Ruskin, you know, in 'St. Mark's Rest' says that every nation writes its history in three books—the book of its Art, the book of its Words, and the book of its Deeds. And in the book of its Arts there is surely none that is so full of meaning, to the historian at least, as Architecture. For that embodies, if anything can embody, the soul of the people, and in the earliest records which we have of the history of man on earth, we have to read

that history very largely in his architecture. And the secret of all great architecture is that it should embody the national life, and should in its course exhibit the aspirations of the people. For it has a great permanency, and if it does not represent the people and the time, it is essentially a failure. (Cheers.) If I may use an illustration which occurs to me at the moment, as I have looked at those wonderful Norman churches in Normandy, the cathedral of Coutance, for example, with that façade which still has the aspect of fortification before the Gothic had fully developed, it seemed to me, I say, as I stood and looked at it, as if I could read in it the story and the aspiration of that wonderful race which came forth out of the dim mists of the North, with the clashing of arms, with their long boats, to go up and down over the face of Europe, and make themselves a kingdom from Scotland to Sicily, and from France to Russia. I seemed to read in those stones the whole story of that great fighting, building race of statesmen and scholars and prelates. And I think the same may be said of a great deal of the architecture in the world—of the greatest architecture, and that which the historian at least best loves to study. It is that which we must have here if we are to have a great architecture, as I fully believe we shall have, and as we are developing it now it must be one that represents us. I do not mean that we must go to work to invent something which is wholly new and strange, which the world has never seen before. The forms of architecture are old, and not likely to be much changed. The secret of success lies in the application of the old forms to the conditions of the people who use them. (Cheers.)

"We have here a new country, but we are not a new people. The people who first came upon this Atlantic coast and started those little settlements which have grown into the United States were the representatives of an old civilization, they were the heirs of the ages, and here their problem was to apply the forms in consonance with what the new country with its new aspirations and its new desires demanded. That is one reason, I think, that we find the Old Colonial forms as a rule so agreeable, because the colonists took the forms of English architecture, the simpler household forms to which they were accustomed, and applied them to the purposes of the New World. They did not merely imitate, they did not merely try to reproduce something which had no connection with its surroundings, which was not of the soil, but they tried to apply the forms which had been tested elsewhere in a way to make them represent the New World in which they found themselves. (Applause.) The Greeks and the Romans, despite



ALMSHOUSE, WOOD GREEN, N.

A. W. S. CROSS, ARCHITECT.

*Photo: Bedford Lemere & Co.*

the fact that the Greeks produced the most wonderful art and literature which any people in the world have ever produced, developed a civilization which was largely economic. Our civilization is pre-eminently an economic and commercial civilization, and the forms to which we should naturally turn for application here are forms congenial to a civilization of that kind, and not the forms which represent an age of faith and force. We have applied these classic or renaissance forms here and with success. I think it must always be a gratification to every American, whatever may happen hereafter, that we can always point to the Capitol in this city, to show that we had a succession of architects who understood at least the purpose for which they were working, and who have left us something at once noble and permanent. (Applause.)

"We are working in new forms to meet new conditions. If I make a mistake in what I am now about to say, you will set it down to an error of taste. But I never pass under the Brooklyn Bridge, especially at night, without thinking that that great bridge, dependent from its piers, is a splendid piece of engineering and architecture which belongs to our time, and represents our

feeling and meets our needs. (Applause.) It is a confession of age, perhaps, to say that I remember the first skyscraper, but that first appearance of the skyscraper struck me as something abnormal and rather dreadful. I have come gradually to the conclusion that this hostility was simply because it was new. It takes a long time to get accustomed to anything which is new, and we are very apt to think because something is new that therefore it is bad. I do not mean to say that all skyscrapers are good (laughter), and I think the examples we meet in Washington, a city which has some beautiful public buildings, of really fine architecture, a city of large spaces and of indefinite room for extension—I think these scattered skyscrapers which we have here are little better than blemishes on the general aspect of the city. I wish we could have some law here as to the height of buildings (applause), for I feel that Washington is not the city of any one of us; it is the city of the whole country; it is the one city in the United States that is not and never can be local. (Applause.) I think it is the common interest of every one of us to do all that we can to make this particular city beautiful, and as a member of Congress charged in a certain degree



with the welfare of Washington, I feel a deep debt of gratitude to Senator McMillan, who is now dead and who with Mr. McKim, Mr. Burnham and the rest, laid out a foundation so wisely that in all that we do in Washington we can proceed on an intelligent plan (loud applause), so that we shall not erect buildings here and there, but have a scheme on which we can work, and which we can carry out—a great plan which would open the Park from the Capitol on to the Washington Monument, and so on to the driveway and the greater park lying outside the city.

“Not being prepared I have been led into a digression on Washington. I will return, then, to the skyscrapers in New York, where there was a necessity on that narrow island, where the only space to expand for the room necessary for the business of the city was upward. Mr. Wells, the English novelist, who was here a year ago, when he went away said, at the close of his last paper, that as he left New York it looked like a collection of packing cases set on end. Mr. Wells was still entangled in the delusion that what is new is necessarily ugly. Mr. Charles Whibley, another Englishman, also a distinguished writer, who has been here still more recently, said on going away that he could not exactly define what it was about New York that struck him, but he was convinced that it was very impressive, and he was certain that there was being worked out there something in the way of architecture and building which the world would one of these days greatly admire. Now you have two opinions both quoted from—I won’t say foreigners—but not from citizens. Certainly there can be no domestic bias in either opinion. And it seems to me, as I come occasionally up the harbour, that the multiplication of those great buildings—which look as if they were huge towers gathering together as you see them in some Italian town—has a great impressiveness about it, and I believe that when it is all complete it will be one of the great architectural effects of the world. I do not mean to say that there are no mistakes and no ugliness and no crudities, and I know very well it is all unfinished, but I do believe that we are working out and applying the old forms to our new needs in a new way, and I am certain that this is the true road to follow.” (Applause.)

Mr. F. HOPKINSON SMITH: “Mr. Lodge has followed my advice—he has said anything he pleased. But I totally differ with him about what he calls ‘that charming classic outline which rises from our midst in the city of New York, and is called the Skyscraper.’ These swaggering structures that lock arms with the clouds and snub the lesser buildings below them, may interest those people who rent the top floor and can

breathe, but what about the people who live in the cañons below? I am informed by an eminent mathematician who has ciphered it out, that if an earthquake came and the tenants, suddenly roused, rushed out pell mell, the people would be piled twenty-eight feet high in the street.

“I remember, many years ago, when Arthur Quartley, one of the most distinguished marine painters America ever produced, lived in Jersey City, he and I would often cross the ferry and watch the sky-line across the water, especially where Trinity Church spire raised its exquisite spindle up into the blue. Now what have we? That same church, with the little God’s Acre about it, which stands as the approach to Wall Street saying to commercialism, “Thus far shalt thou go and no farther,” is lost in masses of flat-headed structures, rows of huge packing boxes set up on end with hot waffle façades, so brutal and ugly in outline that we wonder that any architect having the beauty of his city on his conscience could lend his talent to perpetrate such crimes.

“Suppose all the men within the sound of my voice, men who are trying to do the best they know how, should fill our sky with what the old Four Percents demanded? What would become of us? Suppose we had no Charles McKim—and in speaking for Charles McKim I am speaking of those members of the profession who stand for gain only when it can be gathered in the garden of beauty. Very often, late at night, I stop in front of that temple in marble—at night, remember, when the shadows which one of our most distinguished architects, Mr. Post, speaking at a banquet in New York, insisted were the greatest part in architecture, were missing. Even then I offer up a little thanksgiving of my own that the genius of one of our men could design and bring to completion a building like the Morgan Library, which, not only in the shadows, but in daylight, in the grey dawn of the morning, in the sunrise, in the glory of the June day, is and always will be a thing of beauty and a joy for ever. (Applause.)

“Let us also do honour to the millionaire who poured out his money at the architect’s bidding, resulting in a building which will stand as a civilizing influence both to those who are with us and those who come after us.

“With this digression let me pick up the text of my toast: Painting and Sculpture. While Mr. Lodge may not be in sympathy with what I have said as to the classical beauty of the skyscraper, he has always stood for the advancement of Art in our country, and I call upon him now to assist in every way in his power, to the end that Congress may provide the means for making the inside of our buildings as artistic as the outside. A great architectural triumph stands as an object lesson

to the man from Kansas and the girl from Nebraska. Give them another lesson—a dome, for instance, made glorious by a Blashfield, a Lafarge or a Turner. We cannot educate our people entirely by Carnegie libraries—many of them can't read; others haven't the time—still others don't want to; but show them a marvellous picture inside a great temple, and that man and that woman drink in a note of beauty which is taught to the child, and which in future years becomes a civilizing influence in the home. It is the eye and not the brain which first kindles enthusiasm for that which makes for beauty.

“We have men here within the sound of my voice who made the outside of the temple beautiful, and we have those, too, whose genius has adorned its interior. Do you capitalists and legislators see that hereafter they work together.

“As to Painting in the accepted sense as applied to the decoration of buildings, never put a touch of colour on the outside of any structure. The Great Decorator of the universe does that for us. If you want to see that illustrated in the highest degree go to my own beloved Venice—my own as it is everybody else's who loves colour, form, and beauty. Nine hundred, seven hundred, four hundred years ago, many of the great buildings of Venice were tossed up into the blue. Stand in front of the Salute, you men who analyse colour. What makes that delicious tone which some painters get with emerald green and rose madder, both brilliant colours, but the fingers of Time, gilding and bronzing the bare zinc? What gives to its marble that lovely tint which merges into one delicious grey—what softens into exquisite harmonies the sweep of the canals bordered with palaces so that to-day Venice is without a note of raw colour from Murano to Malamocco? Nothing but the brushes of sun, dew, and frost, helped by the busy chisels of the little devils who bore, dig, and scuttle, dropping the supporting piles so that in all Venice no two lines are parallel, making little garden beds of the cracks, and each a colour note. And not only Venice, but run your eye over the rear of Burlington House in London. Do you remember the statues over the portico, the faces smudged out by the smoke and grime of years; others with shoulders in high relief? What decoration, what mosaic can equal the finger of Time in the harmonies evolved—grey, opal, tones of topaz, of tea rose and amber?

“Keep your pictures for the interior, keep them also for your frames, but as you love posterity and the lessons you try to teach, keep the things that rise into the sunlight, in the rain, the frost, and dew, as the Great Decorator intended they should be.” (Applause.)



THE news of the collapse of the partially completed cantilever bridge at Quebec has been rather differently received by the technical Press in America and the technical Press in the United Kingdom. Comment here has developed upon sane and natural lines—sorrow for the great loss of life, regret at the set-back to a great and valuable enterprise, and some speculation as to the actual cause of the disaster. To speak of the matter as “The Greatest Engineering Disaster” errs on the side of exaggeration; but to find by its subsequent remarks that an American contemporary is mainly concerned with the possible loss of public confidence in the engineering profession endows the whole thing with bathos where should really be pathos.

And yet this anxiety for American professional reputations is not without its justification. It has been said that no one can build a bridge like an Englishman, and in this branch of design England has certainly an established reputation. Probably this is due to the Englishman's aversion to risk, and his preference for erring on the side of safety, both as regards his materials and the method of putting them together.

And it is here that American and English practice has considerably diverged during the last two or three decades. The tendency of engineers across the water is to take risks, to cut down the factor of safety for the sake of economy, to rely too much on absolute theoretical calculations, and to leave little or no margin for possible flaws in the material and unascertained or “secondary” stresses. Progression in this direction is a vice, and it may become as much an obsession as “speed mania.” One can almost imagine a future building into which the introduction of an extra hundredweight or half-hundredweight over the specified load would bring down the whole structure. The triumph of exact mathematical calculations, if, in such a complicated structure as the Quebec bridge, they can ever be absolutely determined for every member, seems to us of less importance than the triumph of erecting a bridge that would last for generations. One must not forget that steel bridges are prone to deterioration, and that the factor of safety must allow for this no less than for the expected loads and stresses.

One can feel commiseration for the reputations which have suffered in this wreck; though in dealing with a bridge whose principal dimensions exceeded those of the Forth Bridge or any previous bridge structure, one would have imagined a greater factor of safety being adopted than the published calculations disclose. As





HOUSE, ABBEY ROAD, ST. JOHN'S WOOD.

E. P. WARREN, ARCHITECT.

regards the Consulting Engineer, some rather unnecessary remarks of his, anent waste of money and material in the Forth Bridge, seem, in the light of recent events, to be one of those boomerang curses that come home to roost.

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R. A. L. FROTHINGHAM, writing in the *Architectural Record* (U.S.A) for August, claims to have discovered an original church model by a Gothic architect. Researches at the British Museum disclosed a certain

amount of proof that models of different parts of a church or even of a whole church "were prepared

by Gothic architects and submitted as projects for approval to the committee in charge, previous to construction." Subsequently, on his way to Paris, Mr. Frothingham stayed at Rouen and discovered his model in the little archæological museum there. "Best of all, it was a model of that greatest gem of late French Gothic, the church of Saint-Maclou." Upon this "carton or papier-mâché" model and its beauties the author discourses for three pages; but his evidences of authenticity appear to us rather thin, and his belief is founded on differences in the details between the model and the actual church, the details of the model favouring an earlier period than those from which they differ in the building itself. From this Mr. Frothingham deduces that the model is older than the church, and ergo that it is the work of Jehanson Salvart or Martin le Roux, or both of them, and that the model was made in or about the year 1414. This is all based on an item in the original archives of the church, it being mentioned therein that these architects contracted "to execute a piece of work for the treasurers of Saint-Maclou, for the considerable sum of 300 gold pieces (écus). It could not have been work on the old church, for it

was not restored, nor on the new church, for it was not begun, nor could it have been for any such work as was paid by day's wages, but only for some such object as the very model. Unfortunately the contract leaves the object unspecified, so this remains a conjecture!" Though Mr. Frothingham leaves the question as "a conjecture" his tone conveys to the reader his own certainty in the matter. The majority of us will probably require a little more proof before taking Mr. Frothingham's deductions on trust. Neither M. de Beaurepaire, the State archivist, nor M. Enlart, the celebrated Gothic expert, knew of an original Gothic model. M. Boeswillwald, of the École des Beaux-Arts, denied the existence of such a thing in France. What little is known about the model points to it as the



work of a priest named Housset in or about the year 1680. According to Mr. Frothingham this man was a thief and a rogue who purloined the model and claimed it as his original work. What is bad about the model is attributed to this man's having made minor restorations to render it sufficiently presentable to support his claim. Mr. Frothingham gives absolutely no authority or proof of his assertions about Housset, and the statement that he was "a most scandalous fellow and hurried the poor curate of the church into a premature grave by the financial complications which he caused," even if correct, does not exactly disprove his ability to have made the model. Mr. Frothingham claims to have converted M. de Lasteyrie, M. Lefevre-Pontalis, and M. Auguste Choisy to his view, that the model is "an unequalled direct product of the brain and hand of one of the foremost Gothic architects." Despite this accession of strength we are still sceptical. If there really were Gothic architects who got out designs for buildings, down to the smallest details, "all the tracery in windows and gables, all the statues in their niches, the relief decoration and pinnacles," including also the stained-glass windows with their figured compositions, we fancy there will be trouble among the upholders of the Craft Guilds theory. But Mr. Frothingham has hardly established his theory. The model may have been made from the original drawings or sketches for the cathedral preserved up till then in the archives; it may have been a design for a new church based on that of Saint-Maclou; or, again, the variations in detail from Saint-Maclou may have been original "improvements" of the modeller. The use of papier mâché for such an intricate work in the year 1414 is extremely improbable. The use of carton in Europe did not become at all well known until the end of the seventeenth century, or approximately until the date when Housset is said to have made the model. So far Mr. Frothingham's conjectures seem entirely wild; but those of our readers who are visiting Rouen may find occasion to visit the Museum and make their own deductions.

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THE trouble of the Acton Urban District Council in connection with its proposed municipal offices is, by now, fairly well known, for the Royal Institute Council has taken the strong and unprecedented course of forbidding the mem-

bers to participate in the competition recently instituted, on the ground that the Urban Council had previously commissioned a design from an architect, and had not paid him the commission usual in such cases. The late Council seems to have

had somewhat expensive ideas for a not very rich urban residential district, for the successful design in the first competition of 1903 would have cost over £80,000 to erect. From local information we learn that the opposition of the ratepayers to the scheme being carried out was so great that the Council was afraid to proceed with it. The contract with the Architect does not seem to have been put under seal; but the Council paid some £1,500 on account of his fees, and because the contract was not under seal was surcharged this amount by the Local Government Board auditor. Subsequently the contract was put under seal, and the Architect paid the balance of his fees, £900. The Council then, by resolution, requested him to prepare a fresh scheme for buildings not to exceed a cost of £35,000, and after sketch designs had been submitted and approved, instructed him to prepare working drawings, the clerk being instructed to draw up a fresh contract with the Architect for carrying through the scheme at a reduced and agreed fee. In the meantime the periodical election came on, and the unpopularity of these proposed building schemes seems to have swamped the old Council and brought into power one with very different views. The late Council had, however, appointed a date for its last meeting, subsequent, we understand, to the date of the election, and this meeting was expressly arranged for ratifying the arrangements in connection with this second scheme. A strong opponent of the scheme, whether a member of the late Council or not we do not know, but who had knowledge of the meeting, seems to have discovered that such a meeting was illegal, the late Council having no power to hold such a meeting after its successor had been elected. He is said to have attended the meeting and opposed the business as *ultra vires*; and on being ruled out of order he produced a mandamus of the High Court prohibiting the meeting. The new Council, bent on economy, refuses to pay the Architect's fees for the second scheme, on the ground that the contract was not sealed. The Architect has issued a writ, and there the matter remains. In the meantime the new Council has instituted a fresh competition for an £18,000 building, but those who have seen the conditions do not think that the Council's requirements can possibly be carried out for the sum; £25,000 is mentioned as the amount probably required. The R.I.B.A. has since prohibited its members from competing, and the Acton Council is in a bad way. The story is instructive, as showing how our Local Governmental machinery sometimes works; but there is a moral for architects—and that is to see that they get their contracts with public bodies under proper seal at the earliest possible moment.





OCEANIC HOUSE, PALL MALL EAST, LONDON.  
HENRY TANNER, JUNR, ARCHITECT.

**T**HOSE who take an intelligent interest in the "battle of the styles," no less than the altruistic folk who have endeavoured, and are still endeavouring, to discover a new style, whose essential features shall be guiltless of plagiaris-

ing past achievements, may be recommended to look about them and observe yet another development in the matter of style, of which we shall probably see and hear more in the immediate future.

Though our present Renaissance revival has seen the erection of much painstaking and intelligent work, it can hardly be said, after a careful survey of our recent modern structures—our municipal buildings, banks, and office blocks—that the old and beautiful details of past examples have been improved under modern development. We are not, perhaps, sufficiently removed in point of time to criticise severely the work of the present day; and possibly a future generation may preserve an affection for "pot-bellied" and blocked columns, top-heavy pediments, vermiculated stonework, and a plethora of swags. Still, it is the fate of a revived style to be vulgarised: and if our restrained and dignified Later Renaissance can be so painfully misused it is somewhat appalling to contemplate the results of incompetent and unsympathetic treatment in dealing with the French styles.

It is not merely in abstract evidences that we note a recrudescence of the French Renaissance. On the purely decorative side it has never left us. But the Ritz Hotel and the new *Morning Post* building are essentially Gallic; the reconstructed "Playhouse" carries us back to the period of Watteau; one or two of our West End mansions

have been reconstructed on Louis Seize lines; for the United Kingdom Provident Institution, illustrated last month, the later Empire period has been employed. And we hear of visits to Great Titchfield Street, and the purchase and perusal of fine old French tomes. And it can hardly be mere coincidence which now prompts Mr. Batsford to bring out portfolios of views and drawings of the Petit Trianon, including the decorations and the furniture; or caused Professor Riley to include measured drawings of the Grand Trianon in the Portfolio he issued about a year ago.

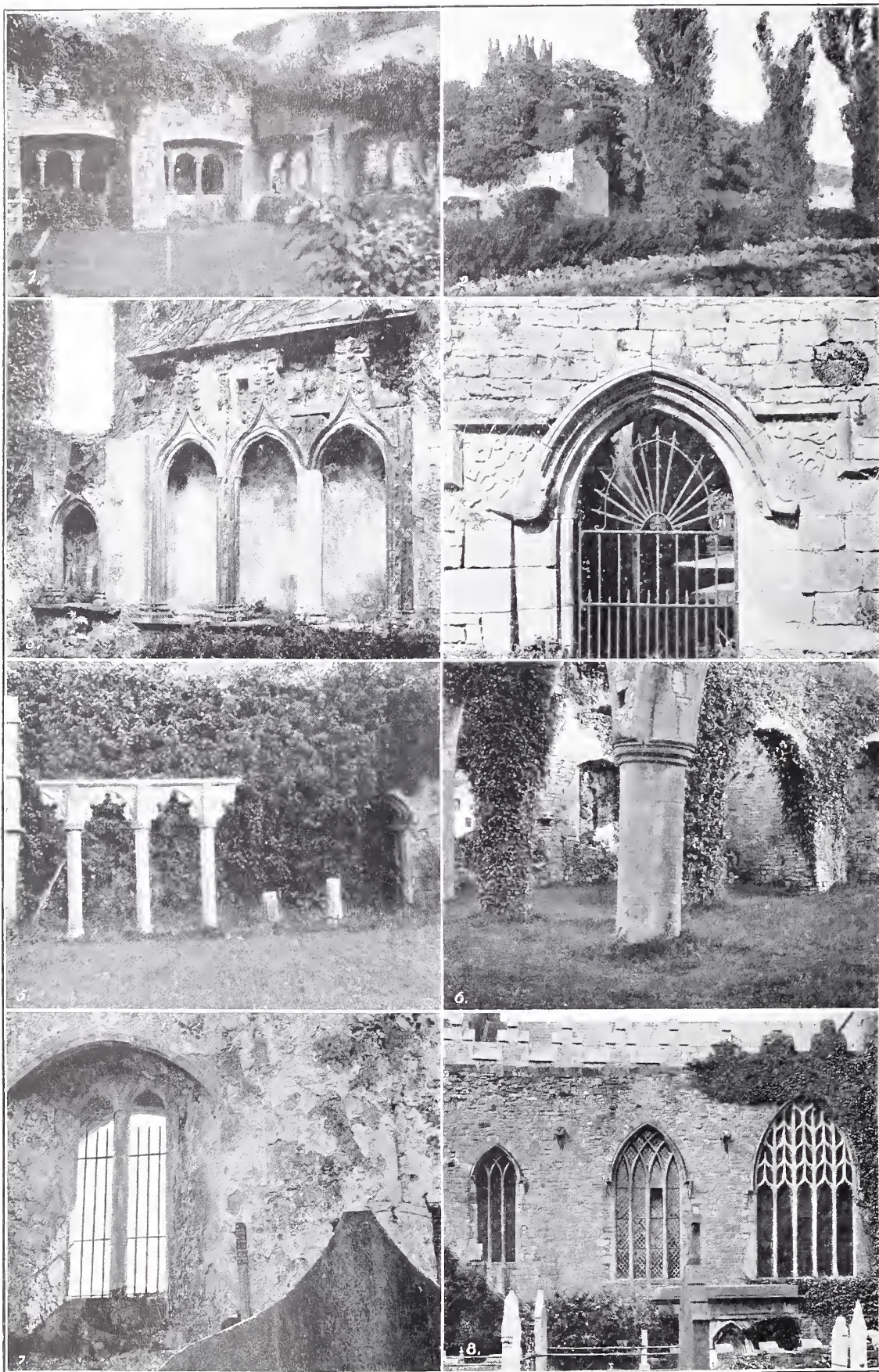
From these and other evidences a recrudescence of the French Renaissance is probably upon us; and let us hope that, excepting the planning, there will be very little Modern French "Renaissance" with it.

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**I**F we are to believe the evidence of photographic views in a weekly contemporary—and the camera, they say, never lies—Crosby Hall is not to be saved. At least the views we have seen showed the housebreakers tearing off the tiles and prising up the floor boards, and these things can hardly be held to make for preservation. The energetic and praiseworthy efforts of antiquaries and historians, backed as they were by the encouragement and interest of the King, failed, as we anticipated, to find a solution of the monetary difficulty. How much of the structure was really old will probably never be determined, but whether the sentiment of keeping that uncertain portion on its original site was worth £250,000 may be doubted. When the age and genuineness of a building is beyond question, it is worth any sum to preserve it on the original site and in the original condition. But in the case of Crosby Hall a perusal of the particulars concerning its nineteenth-century restorations leaves one with the impression that what in it possesses age and sentiment can be as well preserved at South Kensington as on an almost priceless site in the heart of the City.





- (1) Cloisters, Ardfert Abbey.  
 (3) Piscina and Sedilia, Callan Abbey.  
 (5) Cloisters, Holycross Abbey.  
 (7) Window, South side of Choir, Quin Abbey,  
 and traces of plaster-work.

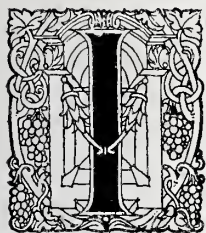
- (2) Church Tower with Irish battlements, Fethard,  
 Co. Tipperary.  
 (4) South Doorway of Nave, Callan Parish Church.  
 (6) South Transept and Aisle, Ardfert Abbey.  
 (8) Windows of South Chapels (formerly Transepts),  
 Limerick Cathedral.



# A Sketch of Irish Ecclesiastical Architecture.

## VIII.—AN ECLECTIC NATIONAL STYLE.

### PART I.



It is plain that, from the time when Gothic architecture established itself in Ireland down to the fifteenth century, its local divergences from English buildings (some isolated, some occurring in a number of instances), though interesting and sometimes striking, had not been enough to constitute more than the possible germs of a national style. But in the fifteenth century, when the erection of monastic buildings took a fresh start (for many friaries were founded then, and such new work would form an example for adding to or remodelling the old), Irish architects not only borrowed their patterns more widely, but combined and varied them so as to work out something like a national style of architecture.

To the visitor who has some knowledge of English architecture, many Irish buildings of the fifteenth and early sixteenth centuries may seem, on a superficial view, merely to have been erected at a number of different times, though with some obvious variations (particularly in the cloisters) from what he has observed in England. It will therefore be best, at the outset, to set down some certain dates for particular

buildings, which will form a foundation for a more correct view of Irish architecture at this period.

A fairly well-known example is Muckross Abbey, near Killarney. About this Parker says:—

The ruins before us would at first sight be set down by any English antiquary to the fourteenth century, with alterations of the fifteenth; but as this friary was only founded in 1440, it is clear that the parts which look like work of the fourteenth century are only imitations; and the same may be observed in nearly all the churches of this class. . . . The chancel is in imitation of the style of the end of the thirteenth century.<sup>97</sup>

The chancel has lancet windows at the side; its east window has tracery of the simple kind in which the mullions of the lower lights are merely prolonged (intersecting each other, since these lights are more than two in number) until they reach the head of the window, a type which appeared in England in the thirteenth century, and of which there are a good many examples, often elaborated, in the fourteenth; in Ireland it became and continued to be especially common. With these forms are combined windows grouped under a square label, quite of English fifteenth-century character, in the church and the domestic buildings, and a door the mouldings of which are of a shallow and rather uniform type fairly common in late Irish doorways. The cloisters are built to carry a story; the arches are round on two sides of the quadrangle, pointed on the other two.

<sup>97</sup> *Gentleman's Magazine*, April, 1864, "Notes on the Architecture of Ireland," p. 420. The friary was founded in 1440, repaired in 1468, and again in 1626.



CHANCEL ARCH, CLONFERT CATHEDRAL.



WEST DOORWAY OF CHURCH, QUIN ABBEY.





QUIN ABBEY FROM THE SOUTH,  
SHOWING REMAINS OF CASTLE.

The Franciscan Friary at Adare, a fine building with a high, slightly tapering central tower, shows windows of all the various kinds mentioned above. It was not founded before 1464. The Augustinian

Abbey at Callan was also founded after the middle of the fifteenth century; the church only remains. It has a curious west window of a type which some would call "flamboyant," rectangular windows filled with cusplless reticulated tracery, and sedilia adorned with somewhat shallow but effective mouldings and excellent foliage.

A more or less definite date—the first half of the fifteenth century—can also be assigned to Quin Abbey, Co. Clare, a well-preserved Franciscan friary of great interest. It was founded in 1402 or in 1433; we have already seen instances of a double date in the case of the monasteries at Strata Florida and at Corcomroe;<sup>98</sup> this is sometimes due to the insufficiency of the revenues assigned by the original founder, sometimes to other causes. Thus the abbey of Vale Royal in Cheshire took its start on another site in 1273; the foundation-stone of the church was laid by Edward I. in 1277; the first abbot, John Chaumpneys, by his influence with that king, got the monastery richly endowed; the monks

removed to "mean and strait lodgings" near their future abbey in 1281; but this was not finished when they celebrated their occupation of it in 1330. And the author of the *Triumphalia Chronologica Monasterii*

<sup>98</sup> See Article VII.



HOLYCROSS ABBEY, FROM THE SOUTH-EAST.

Photo: Lawrence.





ALTAR OF ST. FRANCIS

AND EAST WINDOW, ENNIS ABBEY.

at Muckross and Adare above mentioned) a transept on the south side only, and this transept begins to the west of the tall, plain, tapering tower, which is supported north and south by the short roofs of stone, acting as abutments, which we have already seen in the Franciscan abbey at Kilkenny. There was a wooden gallery at the west end of the nave. The buildings

<sup>99</sup> Since the date of Quin Abbey has been otherwise stated, it will be better to give the evidence. Luke Wadding, *Annales Minorum*, Vol. VIII., p. 48, speaks of its foundation under the year 1350, though he says that it was "fabricatus ignoto nobis tempore." But in Vol. X., p. 218, under the year 1433, after citing a letter from the Pope encouraging the repairs and the building of a new tower at the convent of Clare in the diocese of Tuam, he mentions: "Aliud [monumentum] per quod conventus de Connyc, sive de Coinbe, Laoniensis Diocesis, originem didicimus et fundatorem, quæ alias nos diximus ignorasse. Hoc anno Pontifex licentiam concessit nobili viro Maccon, MacnaMarra, *Duci*, inquit, *Clandcullyen*, ut illum ædificaret pro Fratibus Regularis Observantiæ." Sir James Ware (*Works Concerning Ireland*, edited by Harris, Vol. II., p. 280) also gives the date as 1433. Some writers seem to have known Luke Wadding's first guess, and not his later proof; or they have been unable to believe, in spite of evidence and parallel instances, that thirteenth and fourteenth century features could appear in an Irish fifteenth-century church. On the other hand, the Four Masters say, under the year 1402, "The abbey of Cuinche, in Thomond, in the diocese of Killaloe, was founded for Franciscan friars by Sheeda Cam Mac Namara, Lord of Clann-Coilein." The tower built at Clare-Galway, mentioned above, bears a close resemblance to that at Quin.

*Sanctæ Crucis in Hibernia* (p. 23), having two dates for the foundation of Holycross Abbey to reconcile (while the authentic history of the monastery was for the most-part lost), gives quite a long list of points or landmarks in the development of a monastery, according to which the "foundation" might be fixed. Thus two dates for a foundation, even if there is a considerable interval between them, do not at all necessarily imply that the evidence is conflicting, and therefore untrustworthy.<sup>99</sup>

The church of Quin Abbey is in plan unlike those which are usual in England. It has (like the churches



TOMB BETWEEN SOUTH TRANSEPT CHAPELS, HOLYCROSS ABBEY.





CHOIR OF DOMINICAN CHURCH, CASHEL.



ARCHES OF CLOISTERS, HOLYCROSS ABBEY.

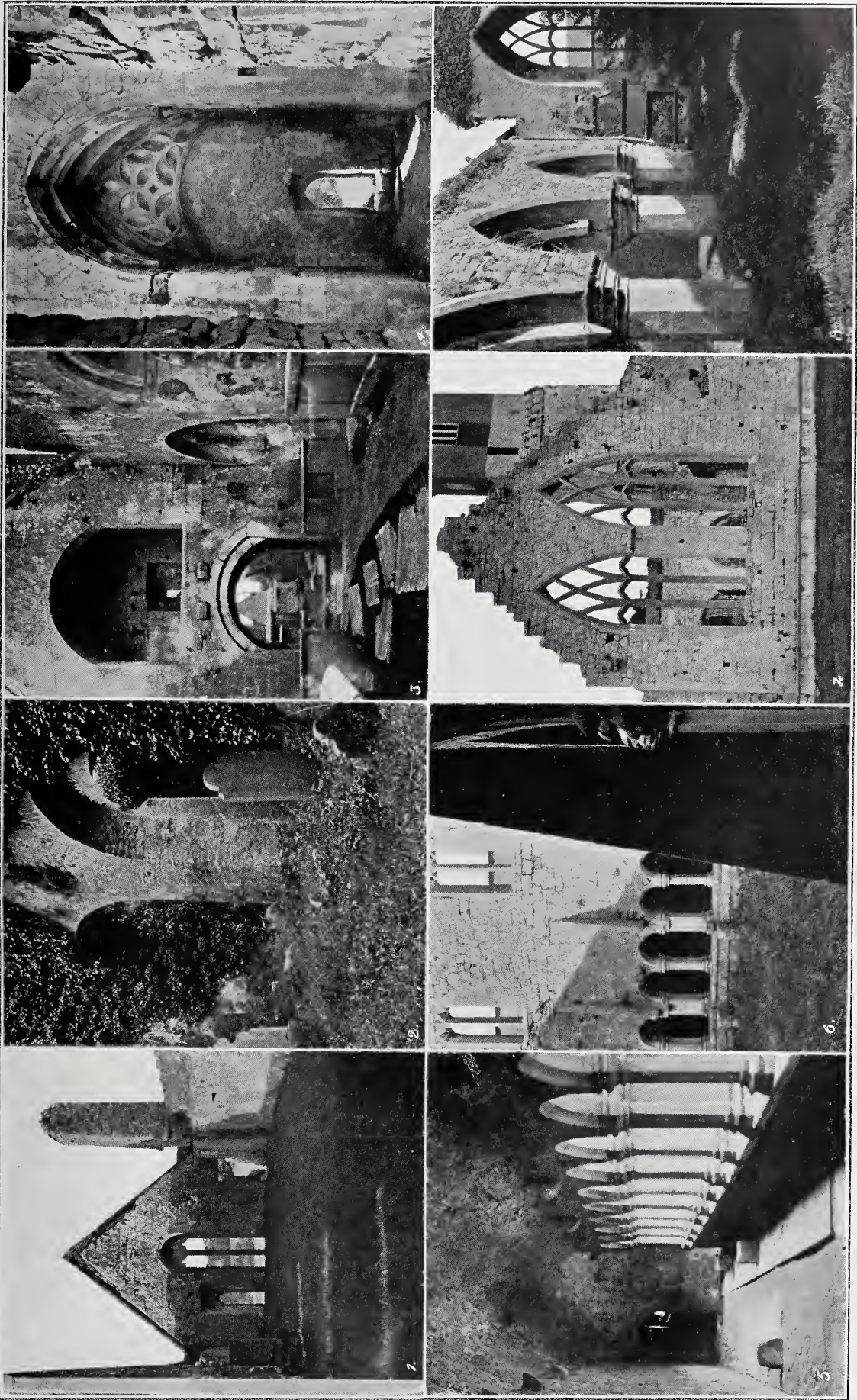


STONE CARVING IN CASHEL CATHEDRAL.



STONE COFFINS OUTSIDE THE BLACK ABBEY, KILKENNY.





(1) Dormitory, Quin Abbey.  
(2) South side of Nave, Holycross Abbey.  
(3) "Pulpitum," or Stone Screen, Ross Abbey.  
(4) Stone Screen-work under abutment of Tower, Ennis Abbey.  
(5) Cloisters, Quin Abbey.  
(6) Cloisters, Quin Abbey.  
(7) South Transept, Ennis Abbey.  
(8) South Aisle, Callan Parish Church.





NAVE OF CALLAN PARISH CHURCH FROM THE NORTH-WEST.

stand on the site of a late thirteenth-century castle, which was ruined by its Irish neighbours a few years after its foundation; much of it, no doubt, supplied building material for the abbey; but the old castle gateway still remains as a part of the southern abutment to the tower, and the church uses other parts of the old thick walls—as, for instance, in the south side of the chancel. Here openings are cut through the castle wall; these are recessed both from the outside and the inside, and half-way through mullions are inserted to form a pair and a triplet of lancet windows. Other windows (in the transept) are of fourteenth-century character; the large windows at the east end of the chancel and the south end of the transept have the intersecting mullions which are so common in late Irish Gothic; above the cloisters are square-headed Perpendicular windows. The west door too has a square label over it, and the mouldings are of a shallow type, squares and quarter-rounds, with hardly any definite grouping. The pointed arch between the nave and transept is almost plain except for a chamfered rib which starts from pointed brackets or corbels. The cloisters are of the

usual Irish type; some of the pillars are twisted; chamfered buttresses are inserted at regular intervals; the vaulted roof is of the ordinary rough kind, but it is groined (without ribs) by the entrance to the church; here the wattle-marks from the centering used are particularly plain.<sup>100</sup> To judge by the corbels, a wooden ceiling has been put up under the rough vault, or at least intended; similar corbels are to be seen in the kitchen. The whole of the vaulting over the rooms on the lower floor has held so well that these would still be habitable (I spent one wet day there in considerable comfort); the dormitory on the upper floor, north of the tower, wants only its wooden roof; the high altar, as well as the two altars at the east end of the nave, are intact; it is not surprising to hear that the friars kept returning to the abbey, and only left it finally in 1760. To the north of

the chancel a building of two stories has been attached, and enlarged in some way after its erection; this was, no doubt, a sacristy below; it bears a considerable resemblance in plan to the building in a similar position at Iona.

<sup>100</sup> See Article III.



CLARE ABBEY, NEAR ENNIS.





OWL ON PIER,  
HOLYCROSS ABBEY.

of its documentary history has been lost, appears clearly to illustrate the transition to the Irish style of the fifteenth century.

Holycross Abbey was founded for Cistercians in 1169 or in 1182, to receive a fragment of the True Cross; to the possession of this it owed its distinction, the abbot ranking as an earl. Of the Romanesque building, probably all the detail that remains is in a doorway opening from the church to the cloisters, with capitals of unusual form. But it appears that the general plan of the church has remained unaltered; it closely resembles that of Jerpoint Abbey<sup>101</sup> (belonging to the same Order), having aisles to the nave, and two pairs of chapels on the east of the transepts. There is a room above the chancel, having a seat in its east window, and above the north transept; rooms also over each pair of transept chapels, both of which command a view of the high altar; that on the south contains a fire-place and other signs that it was used as a living-room. Thus the eastern part of the church is two-storied, and this interweaving of church and living-rooms is a custom of old standing in Ireland, to which attention has already been drawn;<sup>102</sup> here it may well be a continuation of the earlier arrangement in the Romanesque building.

<sup>101</sup> See Article VI.

<sup>102</sup> See Articles III, VI, and VII. In many of the smaller churches of Ireland a habitation has been contrived at the west end, like the Castle at Cashel on a small scale—there are evident signs of this, for instance, in the church of Kilbennan, near Tuam. In England such a combination under one roof is very rare, except in the case of hermitages, and the arrangement at the west end of castle chapels. At Christchurch Priory, in Hampshire, there is an upper story above the Lady Chapel—"St. Michael's Loft"—but this has certainly been a chapel, consequently the resemblance to the Irish examples is very incomplete. Walcot (*Church and Conventual Arrangement*, p. 124) says, "The Dormitory stood over the South Aisle at Wenlock and Wymondham." But rooms over porches are, of course, not uncommon, or sometimes they are over the vestry, as at Bishop's Cannings, in Wiltshire. In Scotland there is a complete house over the transepts at Torphichen, Linlithgowshire, examples of the combination at Arbuthnott and Paisley, at Iona and at Lincluden College, Kirkcudbrightshire, not to mention those belonging to an earlier period. (See Macgibbon and Ross, *The Ecclesiastical Architecture of Scotland*, especially Vol. III).

Passing to architectural details, we may notice that the windows of the transept chapels are of good flowing tracery, one, at least, being of a type not uncommon in English Decorated work. The great east window is "reticulated," but (as in the windows of the north transept) its lower lights only are cusped; the omission of cusps is usual in late Irish Gothic; the ornamentation of the dripstone is peculiar. Above this window a projection of the wall is carried on pointed corbels, such as are common in Irish fifteenth-century architecture; the carrying out of the wall recalls the Early Gothic chancel of Tuam Cathedral.<sup>103</sup> Over the great window is a small square-headed one, like English Perpendicular work, belonging to the room in the upper story. The chancel and transepts have strong and elaborate buttresses, "battering" below; these are probably of the thirteenth century, unaltered. Inside, the stone vaulting of chancel and transepts and that under the tower is elaborately groined: the ribs in part of the north transept roof are cusped. All the eastern

<sup>103</sup> See Article VII.



PISCINA AND SEDILIA, HOLYCROSS ABBEY.



portion of the church is beautifully and elaborately finished—the Cistercian prohibition of ornate architecture, as of bell-towers,<sup>101</sup> seems to have been largely disregarded; but best of all are two specimens of carving, in the chancel and the south transept. The first of these, on the south side of the chancel, is known as “The Tomb of the Good Woman’s Son,”—who these were has not been determined. There is a tomb behind the opening, and the whole may have been designed partly as an ornament to this; but, whatever else it may be, it is certainly the sedilia. The carving, if somewhat stiff, is excellent; if found in England, it would be attributed to the latter part of the fourteenth century. However, above the arches are coats of arms; one of them shows the arms of England, in a form which is not found before about 1405. The wall dividing the south transept chapels is supported on two rows of twisted pillars; we have seen this ornamentation in fourteenth-century work at Limerick (also at Quin Abbey); it may either have been re-introduced from older examples (one of which may have existed here in the Romanesque church superseded), or it may possibly have been borrowed from Italy. The pillars (as in the sedilia here and at Callan Abbey) have bases but no capitals; these are sometimes omitted in late English buildings (also occasionally in Transitional work<sup>105</sup>) and commonly in late French architecture. The wall which they carry forms the canopy of what appears to be a tomb; the roof is elaborately groined; the carving on the panelling below is apparently of similar date to that on the sedilia. The whole tomb-like structure has been thought to be the Shrine of the Relic; but since this is a piece of wood only 3 in. long, the length of its case being only 6½ in., that seems quite incredible. It is locally considered to be “The Waking-place of the Monks,” but according to the Cistercian Use the funeral services of these were held in the choir.<sup>106</sup> There is a slot in which the covering slab could be fixed, and it is probably nothing else than a tomb, though whether it was ever occupied, and for whom it was made, must, like so much else in the history of this monastery, remain undetermined. Above it at one corner is a mutilated bit of sculpture, probably of Daniel and the Lions; there is also a curious isolated carving of an owl—most life-like—on the face of the north-west pier at the crossing.

The cloister court was not inferior to that part of the church which has been described. The cloisters themselves were not of the ordinary Irish kind, being obviously not intended to support a storey above them; they are in general of fourteenth-century character—from an English point of view. The doorways opening into the rooms around (which, as is so often the case, retain their vaulted stone roofs) vary greatly from each other; one has shallow mouldings

which could hardly be earlier than the fifteenth century; others suggest fourteenth-century or even earlier work, though diverging greatly from English mouldings; the most remarkable of all contains an ogee arch, standing—like tracery in a window—under a semi-circular head; both outer and inner arches, and the door-jambs, too, are covered with a sort of billet ornament. We have noticed a similar use of the billet outside its own period in Cashel Cathedral;<sup>107</sup> here again Romanesque work on the site may have suggested the ornament.

In contrast to the work just described in the cloisters and the eastern part of the church, the nave and its aisles are exceedingly plain. The arcade on the north is formed by rough pointed arches standing on plain piers; on the south the piers are similar, but the arches are better built and are round (with pointed relieving-arches above them); round arches, too, are thrown across this aisle to the outer wall, and the piers have small buttresses on their outer side. One is inclined at first sight to consider this portion of the building as an unaltered part of the earlier church. But round arches were often used in late Irish Gothic, as at Ross and Moyne Abbeys; and, at Ardfert Abbey, to a church of thirteenth-century architecture a transept has subsequently been added which is connected with an enlarged south aisle by plain round arches very much like those at Holycross—these plainly cannot be Romanesque work. Holycross Abbey is divided by a wall built across some distance west of the crossing, so as to enlarge the choir or monks’ church according to the Cistercian plan; there was, as we have seen, a corresponding screen at Jerpoint. There is now a Perpendicular west window uncusped, in place of earlier lancets, and the windows in the aisles (which were included under one roof with the nave) are of similar character.

Thus it is plain that this abbey was—at least to a very large extent—remodelled; and, though it is impossible to say how long this took to complete or whether the alterations were carried on without interruption, some of the new work must necessarily be placed after A.D. 1400, much (or perhaps all) of it is unlikely to be earlier,<sup>108</sup> but the large traces of the fourteenth-century style that remain make it interesting as bridging over the transition to the Irish style of the fifteenth century. There are many buildings of this later style which are worthy of description in detail, but it will be better at once to sum up the general features of the architecture which prevailed in Ireland in the fifteenth and the earlier part of the sixteenth century; these will now be easier to follow.

ARTHUR C. CHAMPNEYS.

[The large view of Holycross Abbey is by Lawrence, Dublin, and the other illustrations are from photographs taken by the author, developed and printed by Messrs. Seaman, Ilkeston.]

(To be concluded.)

<sup>101</sup> See Articles VI and VII.

<sup>105</sup> For instance, in a piscina at Glastonbury, a similar niche on the outside of the east wall of the choir of St. David’s, also in shallow Transitional arches or panels in the central tower of Wimborne Minster.

<sup>106</sup> See *Liber Usuum Sacri Cisterciensis Ordinis*, Paris, 1643, cap. xciv, &c. I am indebted to Dr. Wickham Legg, F.S.A., for directing me to this and some other authorities.

<sup>107</sup> See Article VII.

<sup>108</sup> The Perpendicular features are unlikely to have appeared in Ireland before about 1400, just as we saw that in adopting the points belonging to earlier Gothic styles Ireland was behind England in time, and fourteenth-century architecture does not in Ireland necessarily imply fourteenth-century date.

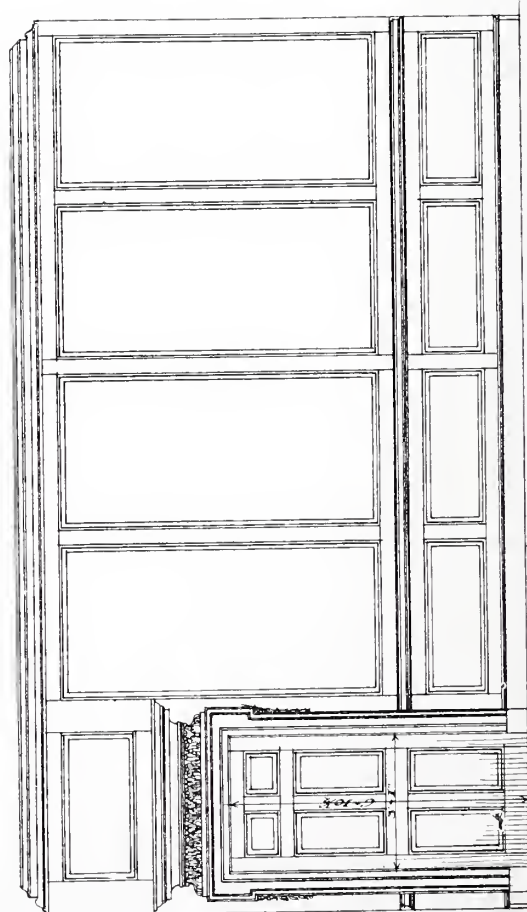
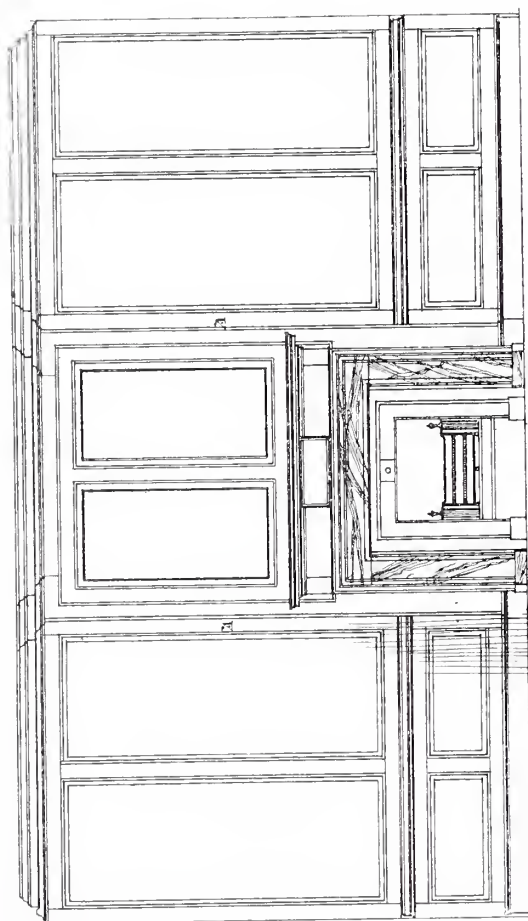
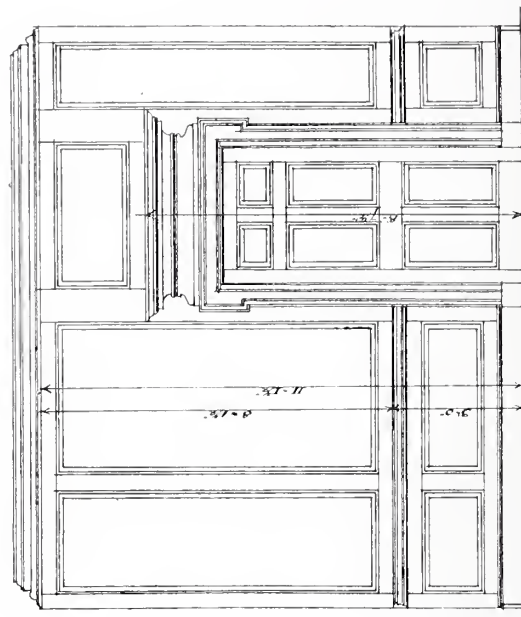
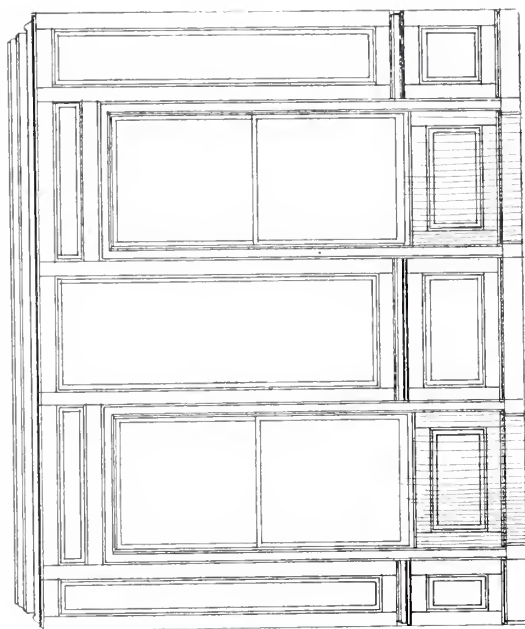


# The Practical Exemplar of Architecture—XVI.



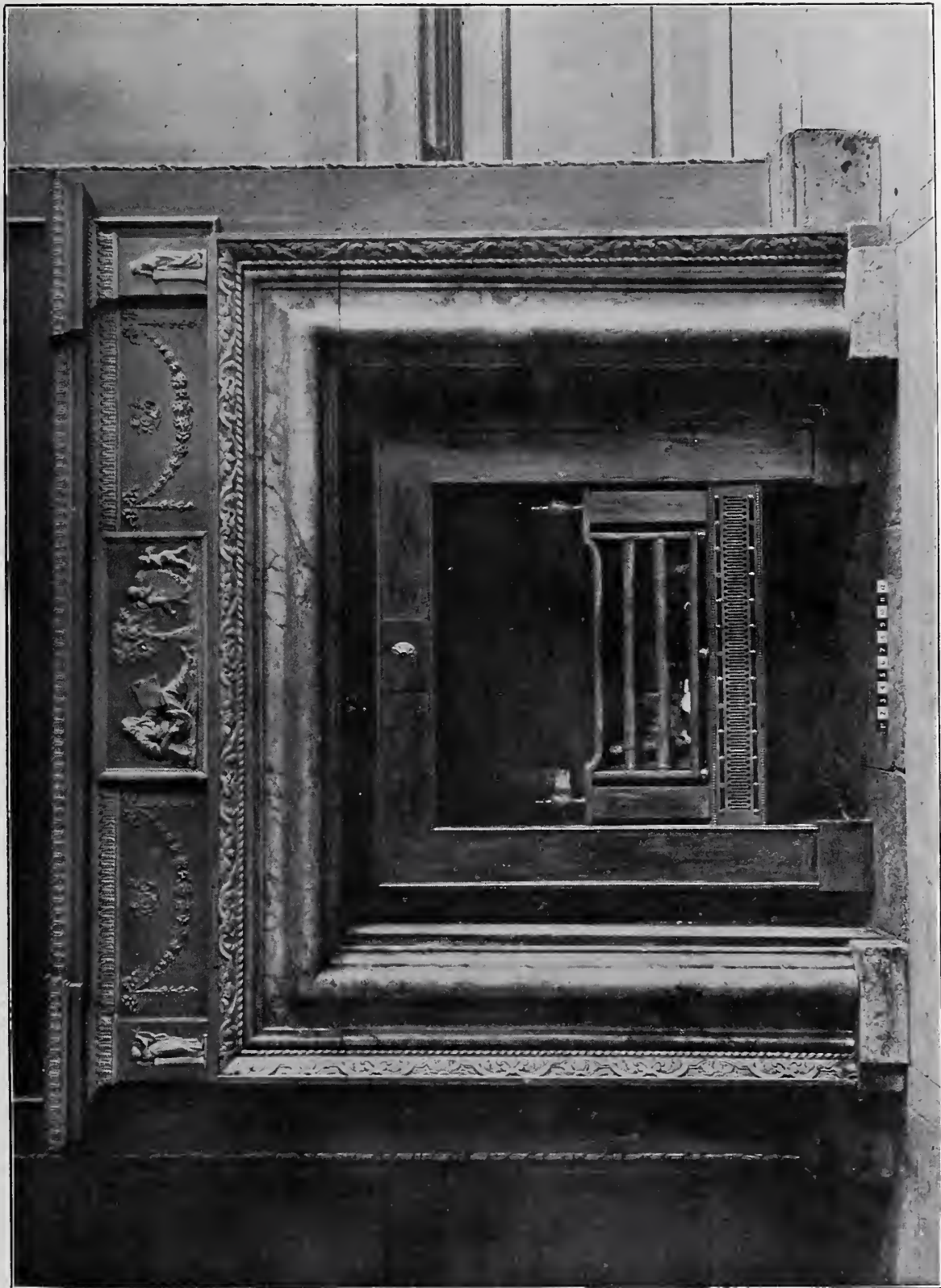
*Board of Education.*





SCALE OF FEET. 1 2 3 4 5 6 7 8 9 10

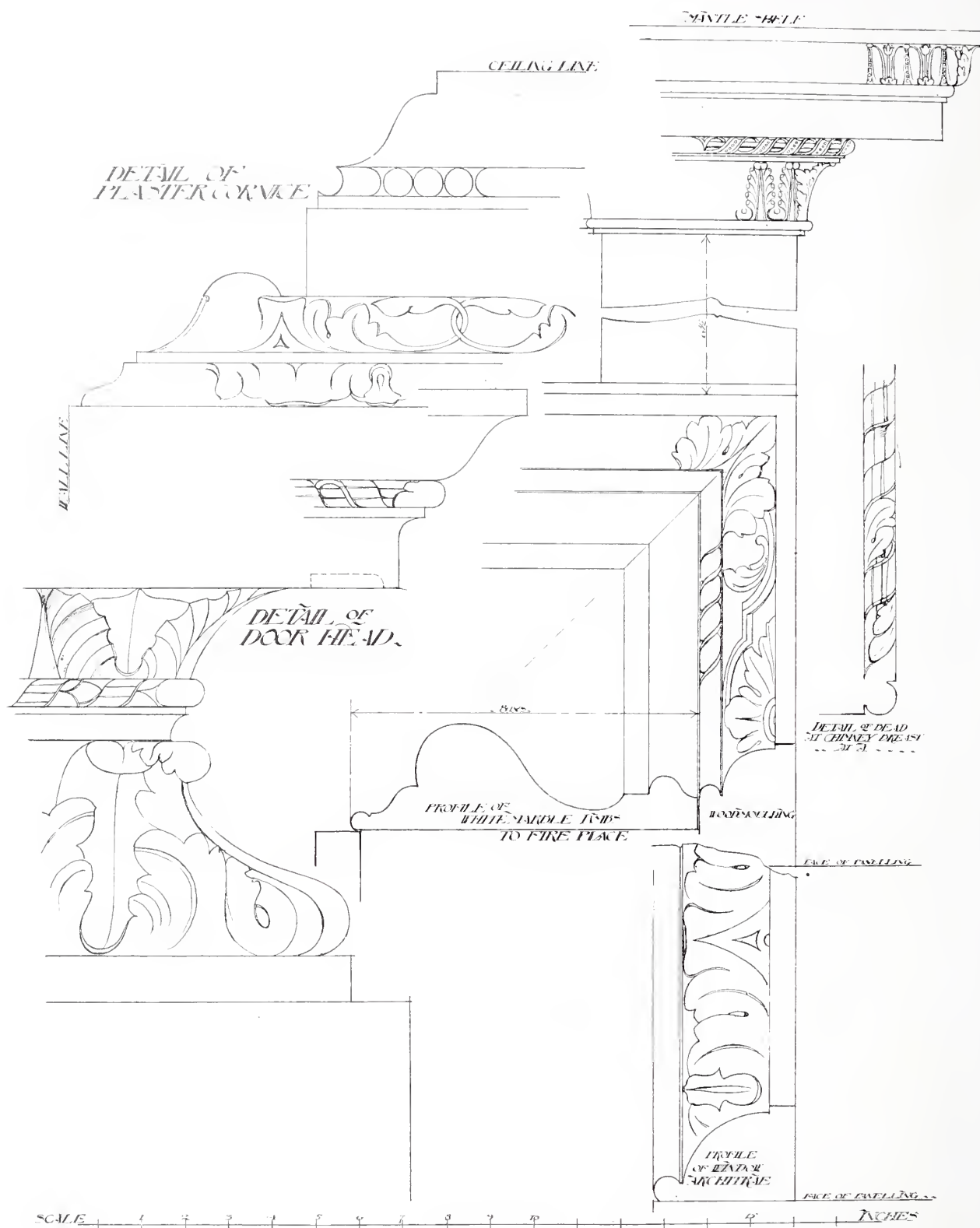




Board of Education.

NO. 26, HATTON GARDEN, E.C. CHIMNEY-PIECE IN SKINNER'S WARD.



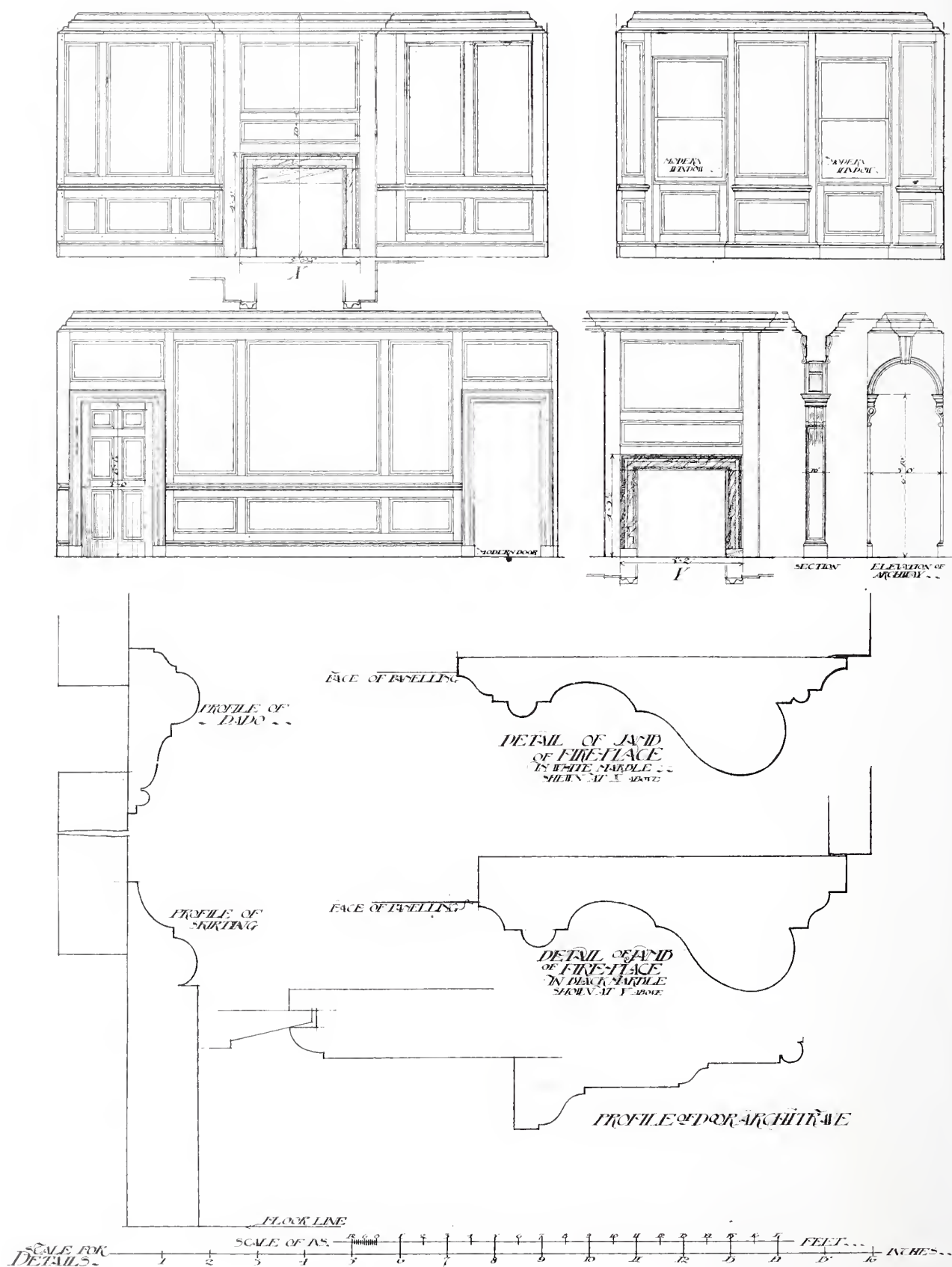






*Photo: Arch. Review Photo, Bureau.*





NO. 26, HATTON GARDEN, E.C. DETAILS OF DOORWAY AND ROOM ON SECOND FLOOR.  
MEASURED AND DRAWN BY J. M. W. HALLEY.



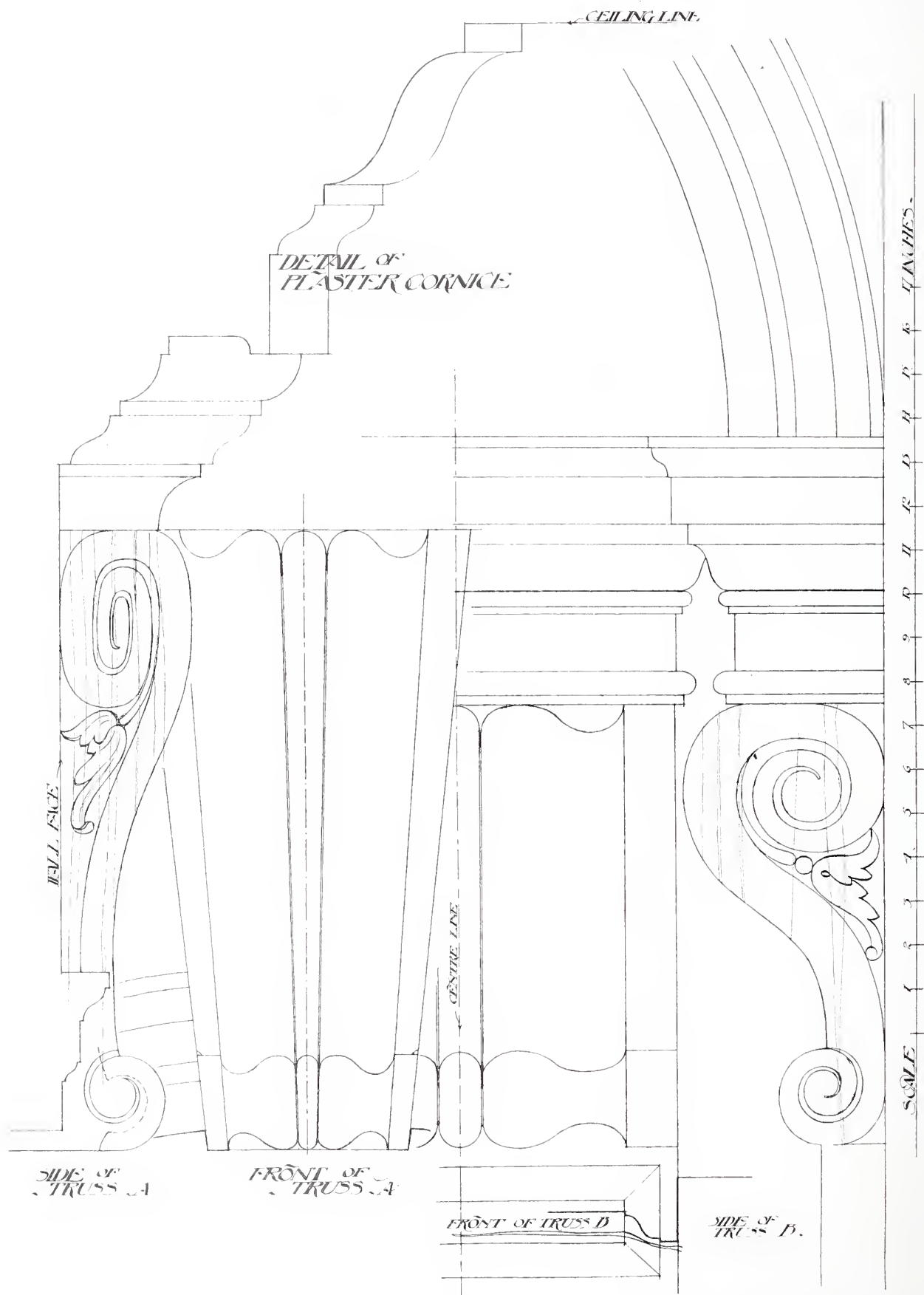


Photos: Arch. Review Photo, Bureau.



NO. 26, HATTON GARDEN, E.C. CHIMNEY-PIECES IN ROOM ON SECOND FLOOR.

(Originally two rooms, but now knocked into one.)



NO. 26, HATTON GARDEN, E.C. DETAILS OF DOORWAY ON SECOND FLOOR.  
MEASURED AND DRAWN BY J. M. W. HALLEY



# “Essentials in Architecture” and the Education of the Public.

## AN APPRECIATION.

for sothe God wot, that what day ye ete therof youre eyen schal open and ye schul ben as goddis, knowing geod and harm.  
. . . . and anoon the eyen of hem bothe openeden; and whan that thay knewe that thay were naked, thay sowede  
of fig leves in maner of breches, to hiden here membirs.



Once demanding and disdain-  
ing their recognition, the  
ignorance of the people has  
been the constant theme of  
the children of Art. Demetrius  
the silversmith still clamor-  
ously resents the neglect of  
his handiwork, though six

thousand years have passed since the education of the public was begun by the serpent in the Garden of Eden; and the “desire of the Royal Institute of British Architects to stimulate popular interest in architecture” is gracefully acknowledged by the dedication to them of a book on the essentials of that art. Yet, it has been for the most part the lay critic, rather than the craftsman himself, who has essayed to direct opinion and to measure achievement by a standard. And very rightly, since the best influence of the artist is not in discourse, but in the quality of his work, in the practice of good rather than in the precept thereof; and the two-fold gift of speech and deed is seldom vouchsafed to any son of Bezaleel.

It is thus the more interesting to find in Mr. Belcher's new book an attempt to arouse interest in and carry to fruition some proposals made by the R.I.B.A. for the education and better informing of the public on architectural matters. He has achieved the task with a very modest directness, and the candour with which he illustrates the principles he enunciates disarms the criticism which the principles themselves might otherwise evoke. Avoiding those alluring by-paths which lead to the blind-alley of fantastic analogy, he follows with simplicity and no little poetic insight the open way to the House Beautiful. The praise of beauty is, indeed, the proper burden of his book, for beauty is all in all to architecture, though it be not always of that kind understood of the vulgar. How, indeed, shall one not of

refined and delicate sympathy, remark the curious suggestion of “an eternal sleep” in the heavy horizontal lines of the Greek Doric temples, or appreciate the idea of “a watchful repose” in the bowed cartouches<sup>1</sup> crowning the Guardia Vecchia?

The book itself has been described and criticised in these columns and elsewhere; excellent as it is, its true interest—unless we are to dismiss it as a mere addition to our bookshelves—is in its underlying motive, the education of the public.

It is worth while to inquire who and what is this “public” which is to be “educated” in architectural affairs.

We may safely assume that in the mind of the author of “Essentials in Architecture” the public to which he desired to appeal was represented by the entity known in building contracts as “the employer”—the average solicitor, tradesman, man-of-business—who regards art as a branch of commerce, and its most satisfactory practitioners those who serve him quickly, without foolish phrases or insistence on self-gratification, with what he wants for his proper purposes. This is that public which is satisfied with, nay, apparently prefers, design which shocks alike the disciple of Classic-Byzantine-Gothic Tradition and the apostle of the Art-Nouveau. With those at the one end of the public scale who have no choice but to occupy buildings provided for them, and with those at the other end, dieted from their youth up upon the arts till they have acquired culture and patronise them, we need not now concern ourselves. It is, after all, our old enemy the bourgeois Philistine we are to conspew—and educate!

“The good public is, after all, not nearly the Fool Collective that some would have us believe,”<sup>2</sup> declared Henley. “Listen!” said Whistler, “there never was an artistic period. There never was an Art-loving nation.”<sup>3</sup> It was clear to the

<sup>1</sup> “Essentials in Architecture,” p. 55. The curved profile of these shields is found alike in the seated statues of the Pharaohs and in the impassive effigies of far-Eastern deities. It is, doubtless, the analogy in outline to those mysterious figures gazing

with eternal calm upon the future and the past, which awakes the mental echo of their attributes.—J.W.S.

<sup>2</sup> W. E. Henley, “Views and Reviews.”

<sup>3</sup> J. McN. Whistler, “Ten o’Clock.”

writers that the public—using the term in the sense before indicated—has no connection at all with art. Those sound common-sense, commonplace citizens accept as meet for their admiration that which they believe the artists themselves to concur in admiring. They are divided in opinion on modern work, being confused by the shoutings of hostile camps, each enthusiastic, strenuously convinced, and earnestly intolerant of alternatives. But they pay willingly the monstrous sums demanded of them for the “Old Masters,” knowing these sealed and fit for adoption as family gods, proper not only for private but, on occasion, for public worship wherein the elect will surely join with eager and inspiring devotion.

This public, in short, follows, and that at a distance, the opinions of the artistry; eventually—being satisfied of a comparative unanimity—endorsing them as valuable consideration. It never can, and never does, form an independent judgment, far less guide that of others. Inferior work may have an ephemeral vogue owing to its fancied resemblance to that of high and accepted merit, but that only survives which is stamped with the approval of the workers in its kind.

To what end, then, is this missionary enterprise for the conversion of the heathen public? If it is anything short of the advancement of the art of architecture it is futile; and if that be indeed its end it shall hardly be attained by inducing the Catechumen to clothe himself “in manner of breches” with maxims, however truthful and simple. Rather will his natural rude health, which digests suburban villas and plate-glass shop fronts without discomfort, be troubled; and he will break out in rashes of red-brick and suffer quacks gladly.

Let us clear our minds of cant, and recognise “the disastrous effects of art upon the middle-classes.” It is the designer, not the public, who requires educating—and design must be improved by the elimination of the incompetent designer. So long as bad examples are numerous and good examples but few, so long as for one “Court Farm” we have a thousand “suburban villas,”<sup>4</sup> so long will the public deem the latter to indicate

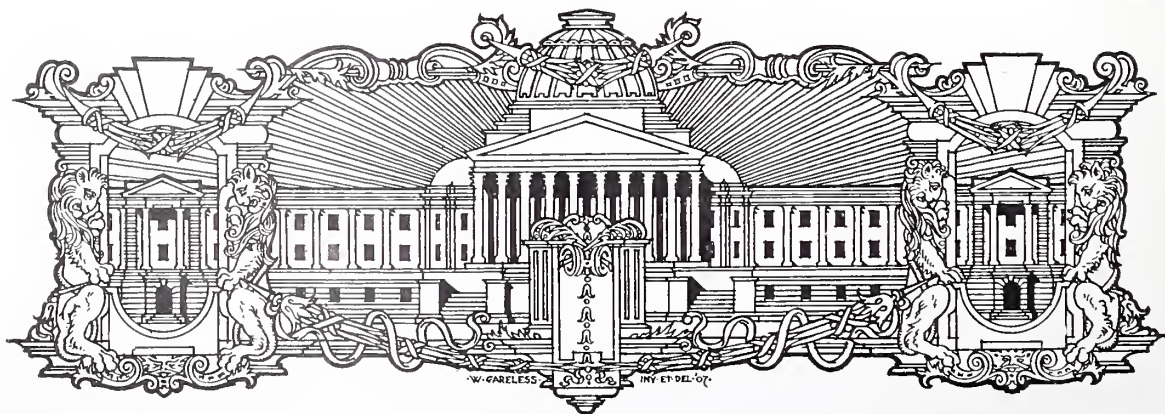
the consensus of artistic opinion, and follow after its fashion. The truth is not always pleasant, and it is disquieting to remark that the deplorable travesties of style, the Babu-like renderings of our architectural language to which we have grown accustomed as part of our daily life, were unknown less than a century ago, and that we owe them, not to the uneducated public, but to incompetent architects. So long as the plain man who wanted a plain building was content to turn to the pages of Batty Langley or another, he was, if not original, always inoffensive and often charming by mere *naïveté*. The evil arose with the discovery of the “profession of architecture” as a remunerative employ for the middle-classes, and uncomfortably near to the date of foundation of that very Royal Institute which is now striving to stem the slushy torrent of incompetence.

Success to their efforts! They have in Mr. Belcher’s book a straightforward profession of faith which should help to the right understanding of the art all such practitioners as honestly care to understand it. That there are at present many who do not so care is a national misfortune, which we shall perhaps “muddle through” in our own British way in time to come.

May the “*Essentials in Architecture*,” then, be read, marked, learned, and inwardly digested by all designers—for their own profit, for that of those who employ them, and for that of all folk who cannot choose but look upon their work. That the public should be invited to analyse the principles which underlie that work, and vex themselves to find the “truth” lying in the nice distinction between virtuous stonework clothing the nakedness of brickwork, and its immoral sister shamefully concealing steel stanchions, is not so certainly desirable. Rather let them rest with the impression left on their minds by the greatly-conceived building and refrain from vain inquiries, lest the ingenious—not perceiving that art is indifferent to morality, and is concerned only with the beautiful—discover inconsistency between the preacher and the practice, and the stars of their twilight be darkened.

JOHN W. SIMPSON.

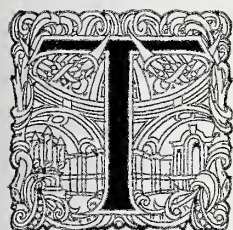
<sup>4</sup> “*Essentials in Architecture*,” p. 121.





# Ditton Place, Balcombe, Sussex.

Cecil C. Brewer and A. Dunbar Smith, Architects.



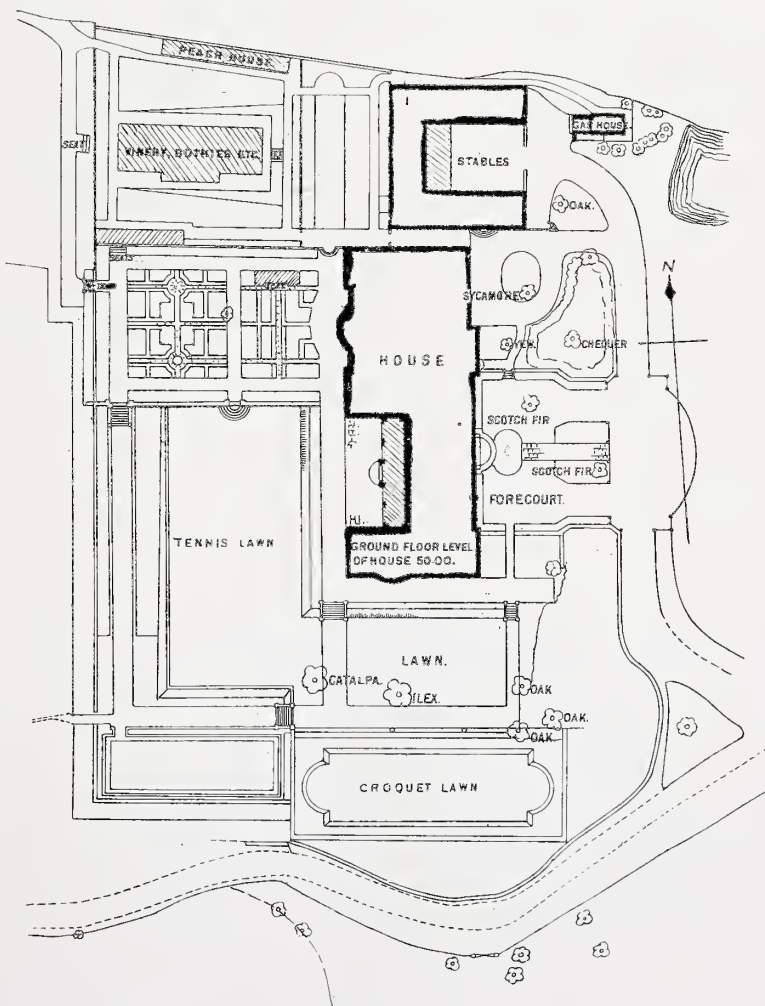
**T**HIS house, recently built for A. B. Horne, Esq., occupies the site of a smaller Mid-Victorian stucco building, which in its turn seems to have been built upon earlier foundations, and was pulled down to give place to the present structure. The gardens, however, had been remodelled some ten years earlier, when the yew hedges were planted and the terraces formed, and in designing the new house regard had to be paid to these, which it was wished not to disturb.

The positions of the chief rooms were also at the owner's wish retained, and the additional space required was gained by pulling down the stables to the north and rebuilding them close to the northern boundary of the property, certain offices being incorporated with them.

The walls are faced with small Wrotham red bricks, the dressings being in Portland stone, the roof covered with thick Precelly rock-faced slates, the eaves cornice being of wood. The main corridors and staircases are of fire-resisting construction. The nurseries and schoolroom are on the second floor, and the whole of the south wing on this floor is occupied by a long attic playroom lined with elm boarding. Some fine mahogany bookcases, designed by Mr. H. P. Horne, architect, for the old house, were refixed in the north end of the library, and the fittings, ceiling, and fireplace of this room were designed by him to harmonise with them.

Mr. J. A. Hunt of Hoddesdon, Herts, was the general contractor. The panellings, chimney-piece, and doors,

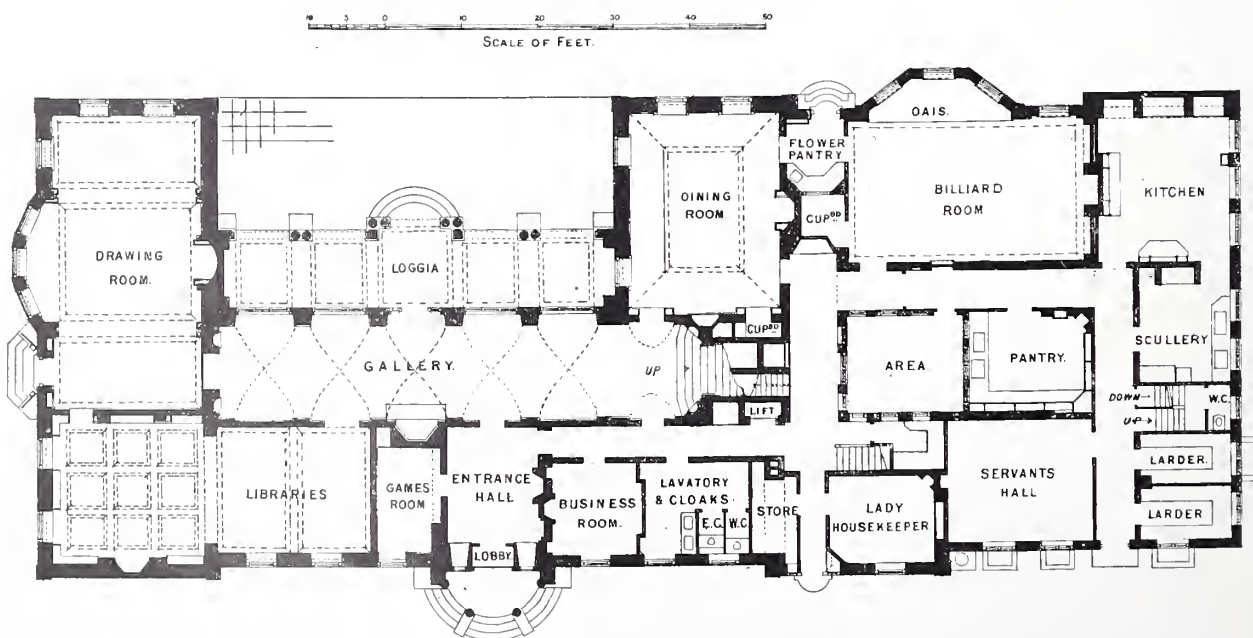
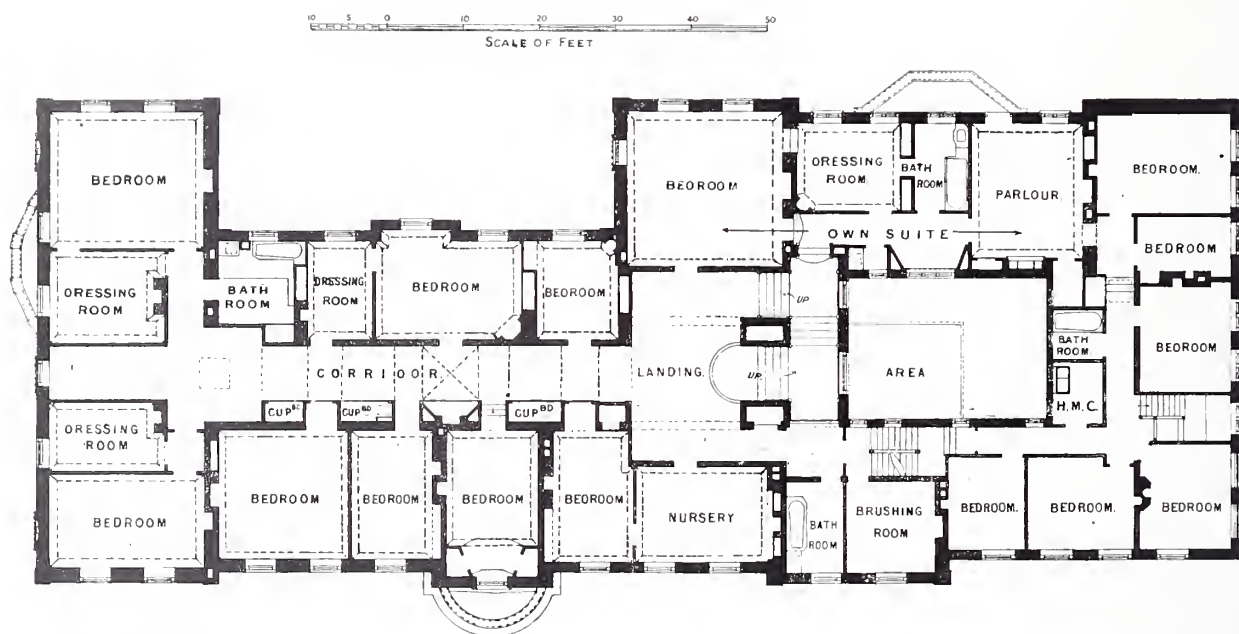
all of white wood painted, in drawing-room; the oak panelling, chimney-piece, and floor to the dining-room; and the panellings, chimney-piece, and fittings, all painted white, in the parlour, were executed by Mr. J. P. White of Bedford. The floors of the loggia and vestibule in black, white, and verde antico marble were executed by Art Pavements and Decorations Ltd. The heating, cooking, and hot-water apparatus are by Messrs. Edwards & Son. The house is fitted with a very complete low-pressure heating



BLOCK PLAN.

apparatus. The boiler is of the Cornish Trentham type, and the main for the whole of the ground floor is on the one-pipe principle, there being separate mains for the other floors. There are in all forty-seven radiators. The hot-water supply apparatus is worked from a separate boiler, and has been specially designed for the purpose of giving an ample supply of hot water night or day. Four baths, nine circulating towel-horses, and various draw-off taps are situated in different parts of the building, but the system, as arranged, brings hot water to every point at once without first having to empty a draw-off pipe of cold water. The kitchen is fitted with "Economic" tile kitchener, and there is a separate hot-plate with oven; the

doors of these are tiled for cleanliness and coolness. There is also a special ventilating arrangement to take off the smell of the cooking. Near to the dining-room is fitted a hot cupboard for warming plates, &c.; this being heated by circulation from the hot-water supply apparatus. A "Worker" grate range is fitted in the nursery, enabling cooking lessons to be taught upstairs. The acetylene gas apparatus was installed by the Allen Co. The stone carving was executed by Messrs. Martyns of Cheltenham. The stables were built by Messrs. Maides and Harper of Croydon. Mr. Cecil C. Brewer was resident on the estate during the progress of the works, Mr. H. H. Jewell acting as clerk of works under him.







*Photo : E. Dockree.*

THE ENTRANCE FRONT.



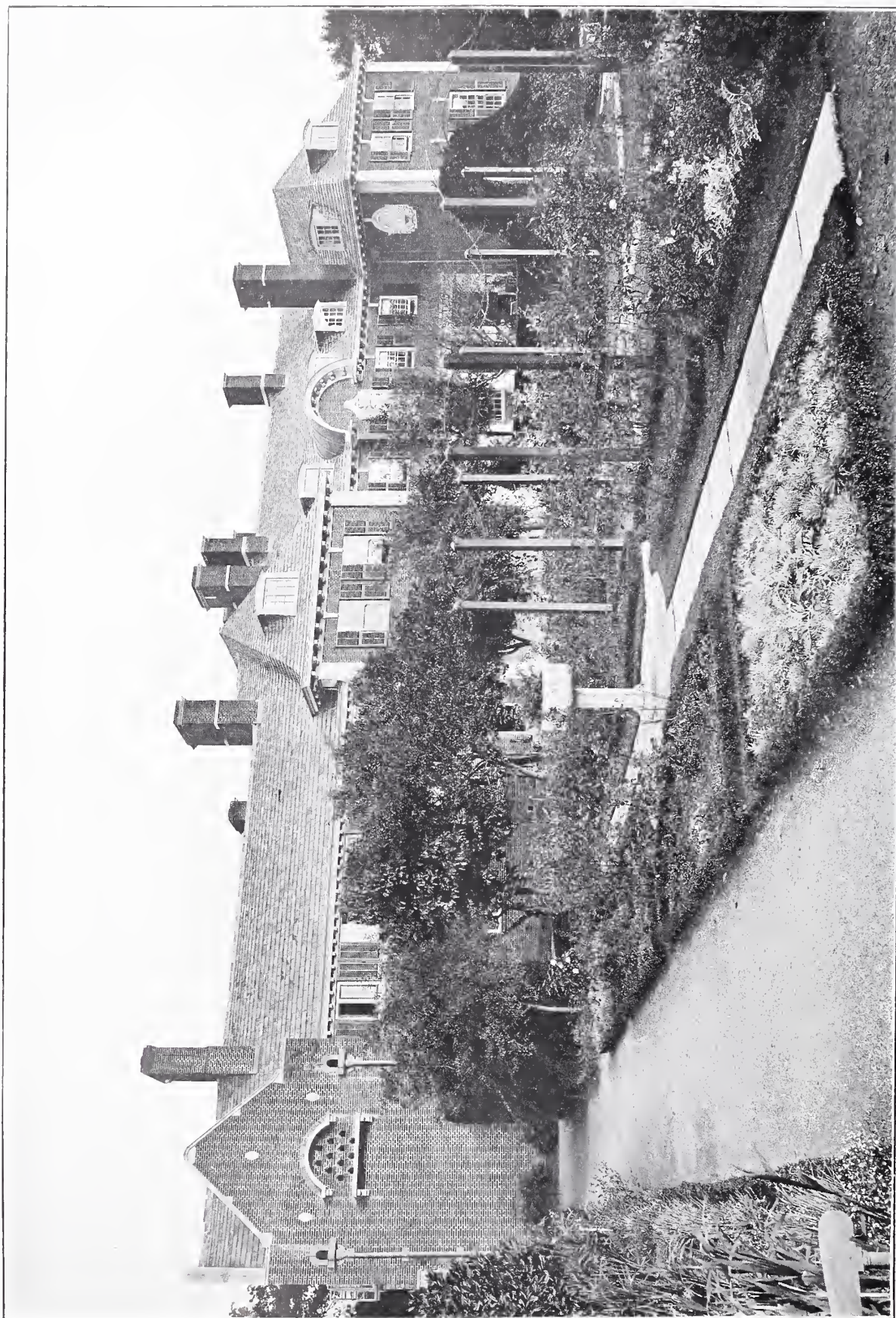
*Photo : E. Dockree.*





*Photo : E. Deckree.*





VIEW FROM THE DUTCH GARDEN.

Photo: E. Dockree.





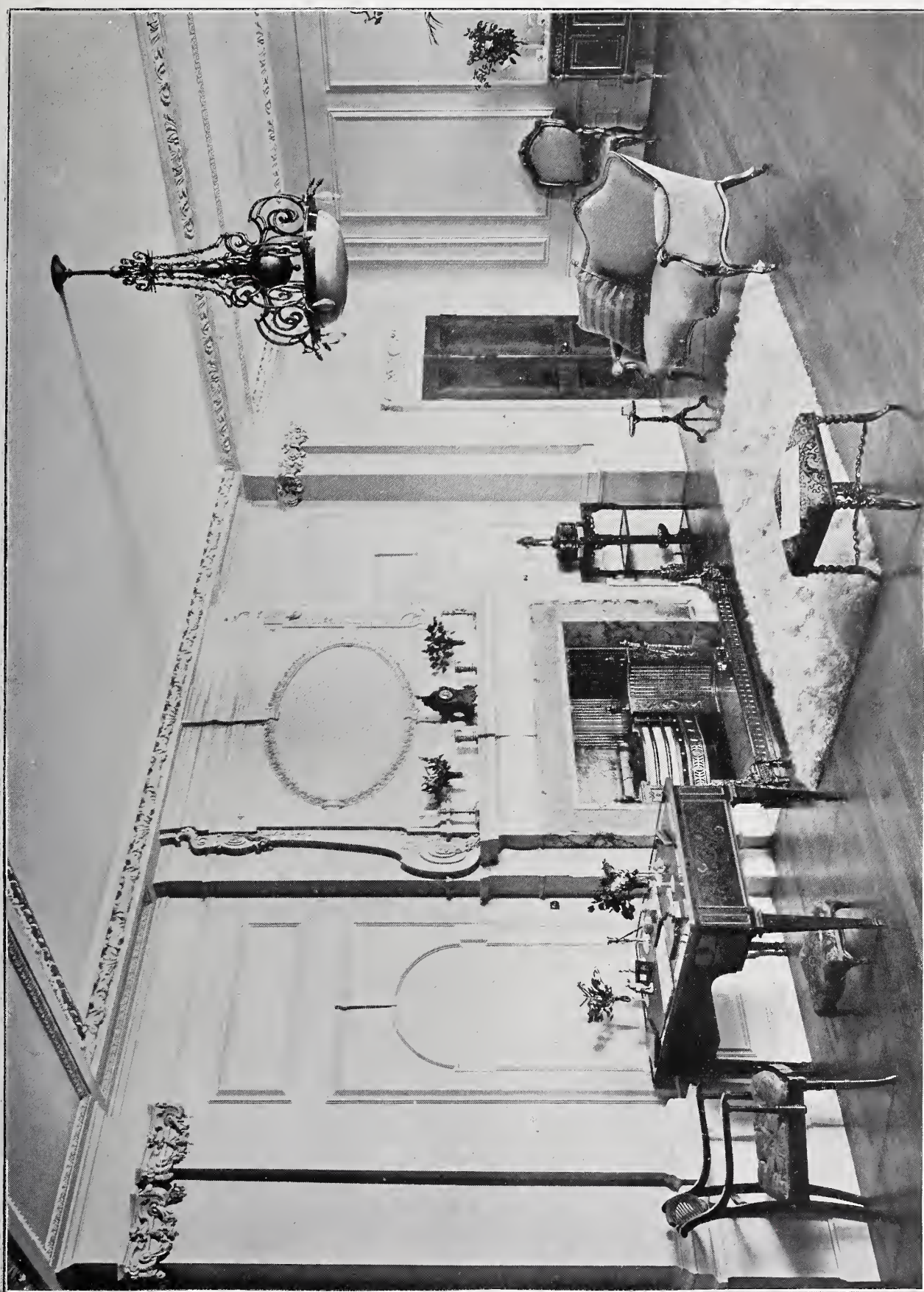
*Photo : E. Dockree.*

GENERAL VIEW FROM THE TENNIS LAWN.



*Photo : E. Dockree.*





*Photo: E. Peckree.*

THE DRAWING-ROOM.





Photos: E. Dockree.

THE LOGGIA.



THE ENTRANCE HALL.



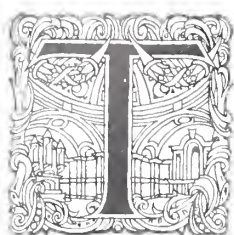


Photo: E. Dockree

THE GALLERY.



## Notes from Paris.



TWO adjacent buildings—Nos. 27 and 27bis, Quai d'Orsay—which have just been put up on the borders of the Seine, merit some notice. One of these houses has a frontage of 39 metres, recessed in the centre, while

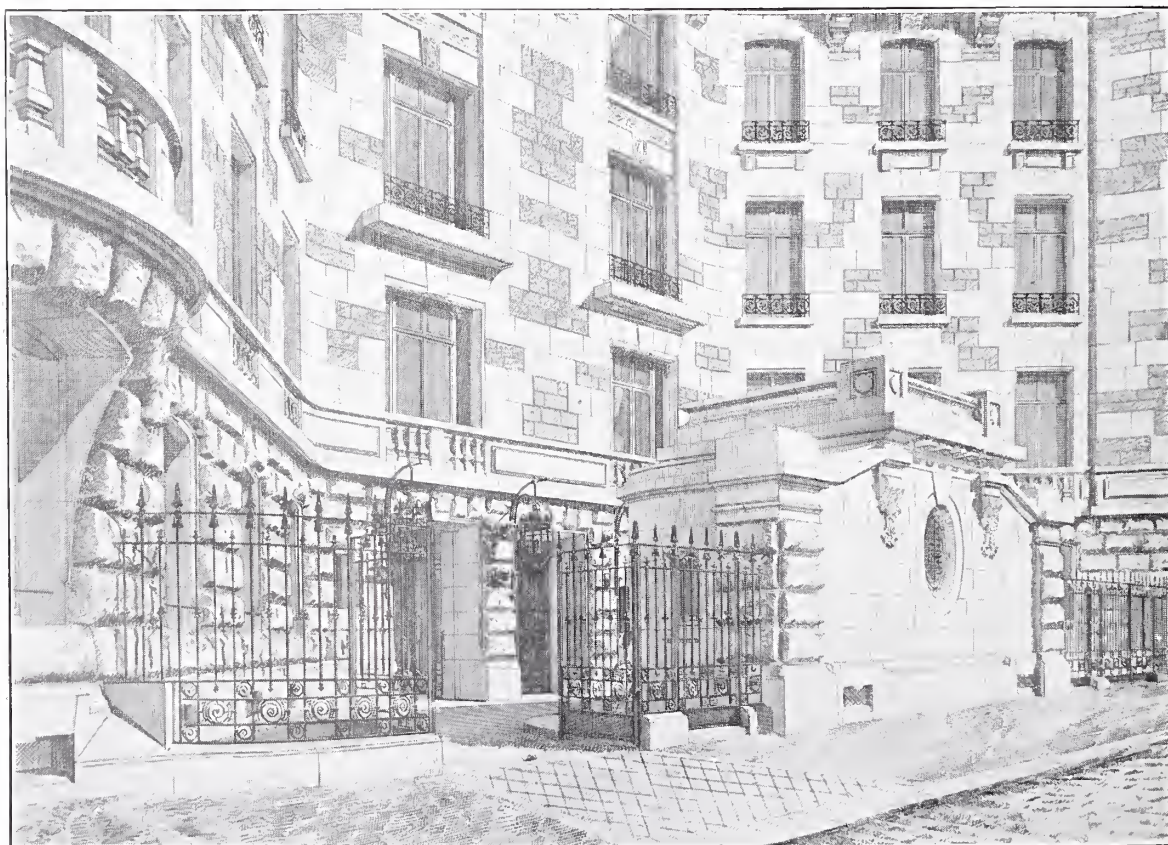
the other has a frontage of only 12 m. 20. The able architect of these dwellings is Monsieur R. Bouwens van der Boijen. In regard to the larger, No. 27, one of the principal difficulties to be overcome was the basement, which is on a level with the Seine. Several of the neighbouring houses are fitted with inverted arches or massive walls of concrete about 80 centimetres thick, but not withstanding these precautions the water infiltrates and the cellars are often flooded. M. Bouwens van der Boijen remedied this state of things by laying a bed of armed cement 20 centimetres thick. Infiltration is avoided, and the cellars, as well as the rear parts of the building, situated 2 metres below the level of the Seine, are absolutely dry.

The façade is composed of bricks and free-stone. The floors are all of armed cement, 20 centimetres thick, giving an advantage of 15 centimetres to each storey over iron floors; this allows the height of each storey to be augmented by 15 centimetres, while at the same time conforming with the police regulations; these

floors are also effective for deadening sound. The cost is about 15.50 francs per superficial metre for a span of 5 metres. The roofs of the two houses are also of armed cement 8 centimetres thick, covered with tiles; by this means rafters have been done away with, allowing of twelve extra rooms for servants, one for each apartment.

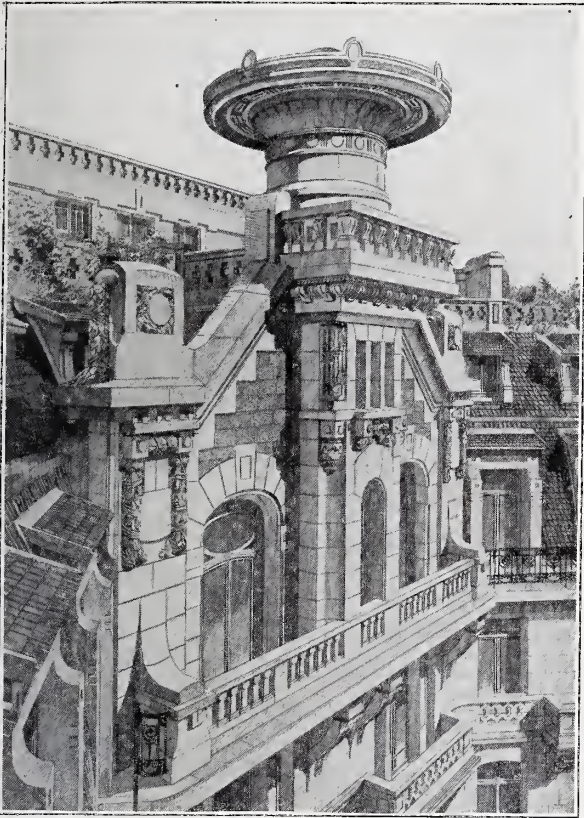
Each storey comprises two flats, reached by a wide staircase in the centre of the building and by two lifts. The servants' staircase has also a lift for the use of the domestics. The flats are all alike in the main. In front, one large drawing-room with a small drawing-room, a corridor, and overlooking the courtyard a smoking-room and a large dining-room. The reception-rooms are all well arranged. There are also three bedrooms in front and two on the courtyard, each having its dressing-room; there are two bathrooms and three water-closets. The servants' quarters are cut off from the living-rooms, together with the kitchen, linen-closet, pantry, &c. Hot water supplied from a main boiler in the cellars is available in all the dressing-rooms. The apartments are heated by steam; the lifts, worked by condensed air, are used in cleaning carpets by means of pipes attached to the air columns.

The concierge occupies a lodge apart from the main building, overlooking the two entrances and the principal staircase, the servants' staircase, and also the garage for bicycles and perambulators.



NO. 27, QUAI D'ORSAY, PARIS. VIEW OF LOWER PART OF FAÇADE.





NO. 27, QUAI D'ORSAY, PARIS. UPPER PART OF FAÇADE.

The apartments on the ground-floor are arranged in the same manner, less the small drawing-room, which has been cut off to make room for the entrance hall. On the sixth and seventh floors are terraces approached by a staircase forming a campanile, and by two other lifts. From these terraces a fine view is obtained all over Paris. The chimney-pots are concealed by masses of flowers and foliage.

The price of the ground was 850 francs per superficial metre.

Turning now to the house known as No. 27bis. As we said, the frontage is 12 m. 20 and the depth 33 metres. With such limited dimensions it was difficult to construct luxurious flats to be let at a rental of 30 francs the superficial metre. However, M. Bouwens van der Boijen conceived the idea of building the flats in two floors, one containing the reception-rooms and the other the bedrooms, connected by interior staircases. The servants' bedrooms overlook the rear court, which is turned into a garden. For these there are two storeys, one for the men, the other for the women. By this arrangement the sixth and seventh floors form a private dwelling-house. Under this court-garden are the garages for automobiles, with eight divisions; these are approached by a plane inclined 15 centimetres to the metre. The whole of this building is supported by twelve columns of armed cement. The apartments are divided by means of light partitions resting upon the floors of armed cement. The front is of ordinary bricks with a coating of sandstone. These pieces of sandstone are round in shape, and are put on in such a way as to appear all one piece, and show no joins whatever. The balconies of the fifth and sixth floors are all in one piece, the floor, the columns, and the floor of the upper balcony all being of monolithic construction in armed cement.

In building these two houses the aim has been to arrange very luxurious and very comfortable apartments, and at the same time to allow of terraces in a part of Paris where a very fine view is to be obtained.

JACQUES ROEDERER.

ROB. MALLET STEVENS.

## Here and There.

### ART AND NO ART.



As a nation we have lately developed a large assortment of national enthusiasms. The simple life, the strenuous life, the trusts, physical culture, yellow journalism, nature study, cities beautiful, graft, health-giving breakfast-foods, reform movements, arts and crafts, men with hoes, ladies with axes, both with muck-rakes—

from Eastport to Miami, from Miami to Galveston, from Galveston to Los Angeles, from there to Seattle, and from Seattle back to Eastport again, these various subjects are earnestly and frivolously discussed by all of us who are active and "in touch" with modern life, which, thank heaven, in this great and glorious country of ours, most of us are.

I suppose this is a good thing, certainly it is so far as it applies to the topics which I have mentioned above. It shows that we can read, that we have intellect, that advertising pays—and if it did not where would all the newspapers and magazines go? (back to the woods, where the paper that made

them would be, too)—and if you add to that that we are Americans, why then surely the whole thing is good. Nothing could be better than to be an intelligent American who can read and knows that it pays to advertise.

I said this is a good thing, and it is—almost all the time—but there are some exceptions. There is no doubt in my mind that it is a great help to us to read all we can about graft and talk all we can about the simple life, do all we can to make the city or town cleaner as to its streets or alleys and more enduring as to its buildings; enthuse to the uttermost on forest preserves, pure water supply, the mosquito war, and the wrongs of our Filipino brother. Of these things I am comparatively ignorant, and I say a universal enthusiastic interest in them is fine.

But when this enthusiasm is turned to art, and particularly to art in the home, and still more particularly to architecture through the medium of popular illustrated journals, then I say that it is bad.

The intelligent American who knows how to read (and advertise) will at once infer from the last statement that I am not wholly ignorant concerning art and architecture; he need



not, however, infer that my knowledge of them is profound. Of art I know but little and of architecture only a little more. Just enough light has been given me to show clearly the folly of those who, ignorant of art and architecture as I of graft or the simple life, rush in fearlessly and devour gleefully the material so abundantly furnished by the periodical literature of to-day, even as I turn with joyful enthusiasm to the subject of municipal water-supply.

But my delusion is at least a harmless one, or comparatively so. I cannot build water-supplies of my own, not to such an extent that they would seriously cumber the earth, and no municipalities would ask me to build theirs. And for the same reason a round number of our other enthusiasms are good and harmless. The spirit of fair play, combined with a desire to get all he can, is undoubtedly inherent in every being, civilised or uncivilised, and so, just at present, we are hugely interested in trusts—it doesn't seem to hurt them very much and may do us good.

So long, then, as the subject is one of which I am ignorant, one that this enthusiasm does not permanently affect, and one that deals with some inherent right of every civilised being, proud or humble, rich or poor, learned or simple—so long as our enthusiasm is thus manifested it is good.

Art and architecture, however, and especially architecture, are neither of them subjects of this type.

Let me quote Whistler a little. He says; "Listen. There never was an artistic nation" . . . "people lived in marvels of art—and ate and drank out of masterpieces—for there was nothing else to eat and to drink out of, and no bad building to live in; no article of daily life, of luxury, or of necessity that had not been handed down from the design of the master, and made by his workmen. And the people questioned not and had nothing to say in the matter. So Greece was in its splendour, and art reigned supreme by force of fact, not by election—and there was no meddling from the outsider" . . . "and the world was flooded with all that was beautiful until there arose a new class, who discovered the cheap and foresaw fortune in the failure of the sham. Then sprang into existence the tawdry, the common, the gew-gaw. The taste of the tradesman supplanted the science of the artist, and what was born of the million went back to them and charmed them, for it was after their own heart; and the great and the small, the statesman and the slave, took to themselves the abomination that was tendered and preferred it—and have lived with it ever since. And the artist's occupation was gone, and the manufacturer and the huckster took his place. And now the heroes filled from the jugs and drank from the bowls—with understanding—noting the glare of their new bravery, and taking pride in its worth. And the people—this time—had much to say in the matter—and all were satisfied. And Birmingham and Manchester arose in their might—and art was relegated to the curiosity-shop."

I think even the most ignorant of us will agree with this—and, agreeing, find but little cause for rejoicing in a wide and popular enthusiasm for art, and when, as at the present day, this enthusiasm descends upon architecture our plight is even sorrier, inasmuch as that, turn where we may, we cannot but face the results.

Now, as many of us, not so very ignorant, perhaps, while admitting that the relative performance and prominence of architectural works lay them open to more searching criticism, may claim that the results achieved in the last decade or two are good and that these results are at least in part due to this very popular interest and enthusiasm, it might appear that it devolves upon me to establish my claim by demonstrating that the building of the intelligent American citizen has grown worse instead of better architecturally in the last forty years.

It would be easy to do so. But I do not believe this. Architecture has lagged behind in the procession, that is all.

It may as well be said here that my ignorance of art as expressed in painting and sculpture is too great to permit me to consider the effect upon them of this popular enthusiasm. I have quoted Whistler instead, and my comments will be strictly confined to architecture, including such adjuncts of domestic architecture as decorations and furniture.

Furthermore, they will be confined to what is usually called the æsthetic side of architecture, for it is to this side that the great majority of periodicals have turned their attention lately. Of course the desire to spread the gospel of beauty is a laudable one. We know the elevating influence of beautiful things ourselves, and we wish everyone else to benefit by the same influence. The barrenness of thousands of homes is only equalled by the barbarity of thousands more, and our heart goes out to those who cannot have about them in their daily life the silent influence for good exerted through a simple Colonial exterior or a dull-olive-green-burlap interior with mission-oak fixings.

But the missionary is always tempted a little to run away with himself, no matter what his propaganda may be, and particularly is the missionary in the new field liable to this failing. So that the message to the people on architecture, which is one of the latest, has particularly suffered through the zeal of its bearers.

It was twenty or twenty-five years ago that the pioneers of the present movement appeared in one or two of the very limited number of illustrated magazines.

Those of us who can remember as far back as that will recall with pleasure the "new light" which was given us by means of so-called Queen Anne exteriors and modified Eastlake interiors. We sought early and late for quaint combinations of line and for hitherto unheard-of materials which we might assemble for our dwellings. (It might be said that the utilisation of by-products, that wonderful source of profit to our greatest trusts of the present day, was inaugurated by this early popular movement for artistic homes.) The discarded bottle, the heretofore worthless brick, the tin label from our national weed, were eagerly sought by builders of the æsthetic. We found supreme joy in discovering some decorative use to which we could put almost any old thing, provided we discovered it first: the result was marvellous and we took it so seriously! The people who had a sun-flower-decorated ten-inch Akron sewer-pipe in their front hall lamented the lack of taste which made a rose-painted tambourine hung up by peacock-blue ribbon desirable to their neighbour; and the tambourine-worshiper lifted his eyebrows at the young wooden snow-shovel which, bearing a picture of Niagara Falls in winter done in "frosted" paint with a crimson satin bow on the handle, stood proudly against the parlor wall of his still more benighted neighbour.

So we all acquired the habit, indeed we did; and we knew that at last our homes were feeling the uplifting influence of Art. But those things referred especially to the interior of our castles. It was several years before our magazines took up the education of the people as to exteriors. One of the earliest sinners or saints of the latter variety was a technical magazine which as a "by-product," so to speak, began an architectural supplement. And then, as the fact dawned upon us that advertising paid, the architectural supplement grew, and now the intelligent reading American citizen has between thirty and forty magazines, mostly illustrated, to point the way to higher things in architecture and its attendant hand-maidens—and this leaves out all the Sunday newspaper supplements, too.

Aside from the results, the worst feature of this condition of things is this: Rightly or wrongly, the printed and illustrated page carries with it a certain prestige to nearly all of us; we all swear by our pet newspapers, and all of these magazines with which I have my quarrel are bound to be.



dogmatic. They can't be critical. It is their job to convince the reader that the simple Colonial mansion modelled after the grand old estate of Beechwood on the James, but brought up to date by the triumphs of modern architectural genius, and built complete, with modern sanitary plumbing, hardwood floors and art glass, for 6,284 dols., anywhere within four hundred miles of New York—it is for them to convince the reader—and looker—that this dwelling is the best of its kind and that this kind is the best.

That they do so convince the reader is evident from the fact that these articles multiply in the popular magazines and that dozens of magazines dealing solely with the subject are being published, all of which wouldn't happen if it didn't pay commercially. Now, the purchaser and the reader being told that his purchase is good, is in exactly the frame of mind of the lady or gentleman who takes patent medicines, a frame of mind, to judge from the pictures accompanying patent medicine testimonials, which can be destructive to the future of architecture and the intellect of the purchaser.

That it is so is evident from the aforesaid results with which we are surrounded to-day.

Twenty-five, fifty, or seventy-five years ago American towns and cities were made up, broadly speaking, of two types of buildings—those which were “architectural” and those which were not. That is to say, certain buildings were planned and designed by men who had a certain knowledge of architectural principles and practice—that is, by architects—or were more or less successful attempts at imitation of these buildings; of the other type, and greatly in the majority, were structures which, whether dwellings, factories, or business blocks, were strictly utilitarian and depended for what slight attempts in æsthetics they might have upon very simple and long-established traditions in certain details of exterior and interior finish.

The Capitol at Washington, the City Hall and Trinity Church in New York, the Athenæum and the State House in Boston, the “Colonial” house of Virginia or of Salem, and the pseudo-Greek mansion of the Middle Atlantic States are representative of the “architectural” type of this period, and I am not aware that all our enthusiasm for architecture in the past twenty years has produced anything better than these buildings and of scores more like them.

Of the second type, the utilitarian with more or less adornment, where the Italian “villas,” the “swell-front” rows of red brick dwellings of Baltimore and Boston, the brownstone fronts of New York, the red-and-white of Philadelphia, and last, and greatest in number, the plain house of the small city or town; just the plain house, usually painted white with green blinds, often with a picket fence around it, with a one-story front porch or just a stoop, its gable usually to the street.

I respectfully submit that a village street of those houses, or a city street of the type of Chestnut Street in Boston, is as well qualified to satisfy the seeker for truth and beauty as is the street, in town or city, which has drawn its inspiration from our architectural enthusiasms of the last five or ten years.

Our warehouses, our railway-stations, our factories—in fact, almost all of our buildings in which the most rigid adherence to utilitarianism has been insisted upon, have gone on steadily improving for many years, excepting at intervals when some ill-advised corporation has endeavoured to incorporate architecture into its advertising account, and even then the result is not always bad; for the corporation, probably realising that it hasn't a soul, goes frankly to someone who has and gets him to use it. In no other class of buildings has the improve-

ment in our architecture been so great as in these. If architecture as an art has little or nothing to do with them, so much the worse for architecture.

Let us have good architecture, by all means. Let us have all we can, so long as it is good or even not too bad, but because we have a Columbian, or a Trans-Mississippi, or a Pan-American, or a Louisiana-Purchase exposition, must we flood the country with imitations of various buildings designed for those events, imitations which bear about the same relation to the originals as a “frosted” souvenir-postal of the Jungfrau bears to the mountain itself? Because a reasonably intelligent and not too unscrupulous plutocrat employs an architect to design him a Georgian mansion or a Francis I. château, is it necessary for the suburban districts of all our centres of industry and commerce to plant rows upon rows of minute hybrids upon fifty-foot lots?

Time was when the church structure received our admiration, even the austere and meagre temple of our Puritan forefathers was architectural; but for the last half-century what have we done? Perhaps the Catholic and the Episcopal churches have pretty generally escaped the contagion. But the others! Illustrated, the ecclesiastical portion of this article would be blasphemous; mere type being inadequate, the topic is dismissed.

Even granting that it is necessary to cover every building lot that modern real-estate experts can obtain building-loans upon with Queen Anne and Colonial and California mission and English half-timbered detached and semi-detached villas and “bungalows” and modest and immodest “homes” and tenements—granting that this is inherent in our spirit as a nation with the Declaration of Independence behind it, and the spirit of “get there” pervading it—granting this, must we add the reproach of hypocrisy by proclaiming, as we do, that all this is prompted by a love for the “beautiful and the true” in art? It may be legitimate, it is at least common, to talk poppycock as an aid in selling soap or health foods, but it isn't, or it ought not to be, nice to sell art or architecture in that way.

It is especially in the interior of the house, in its decorating and furnishing, that this spectre of advertised art stalks supreme. How many million feet of lumber have been consumed in slab-mission fumed chairs and tables and settles? What tons of iron in fire-dogs and lanterns? What miles of old terra-cotta burlap with dull green stencilings? The burlap I approve, however, for you can stick pins in it.

And we are doing it all “for love of art,” and we know that it pays to advertise. But there are oases left still in this Sahara of “art in the home.” Some one, somewhere, makes chairs—easy-chairs, rocking-chairs, hour-glass chairs, and tables of willow or rattan cunningly woven, which are light and comfortable; some one makes Austrian “bentwood” chairs, some one (and may he be blessed) makes large soft (not too soft) cushioned, round-backed, round-armed, leather-covered chairs with castors on them. I have never heard or read that any of these articles of furniture were made by people who had even the faintest perception of line or form as it should express itself when touched by the divine fire, but to paraphrase a rhyme addressed by our most reverend university to her sister next in age, I know that “wicker chairs were wicker when mission was a pup,” and I hope that “bentwood will be bentwood when mission's burning up.”

I think all of us are spending for “art” a whole lot of money which would better be devoted to home missions.

GEORGE CLARENCE GARDNER

*in the “American Architect.”*



# The Sunderland Law Courts, Police and Fire Stations.

W. & T. R. Milburn and Wills & Anderson, Joint Architects.



COMPETITION was instituted for these buildings in 1902, which was assessed by Mr. J. S. Gibson, and in which the first placed design was that submitted by W. & T. R. Milburn, of Sunderland,

and Wills & Anderson, of

London, who have acted as joint architects for the buildings.

The site is an awkward and irregular-shaped piece of ground fronting on two streets—Gill Bridge Avenue, where the courts and police station have been erected; and Dun Cow Street, on which the fire station buildings are placed.

The original price fixed for the whole of the buildings was £38,000, but additions decided on by the Corporation have brought the contract price up to over £40,000.

The irregular nature of the site rendered a symmetrical plan impossible. The conditions suggested a court on each floor, but it was impossible to arrange this with due regard to light, ventilation, and economical construction and administration, which are obtained by the plan shown, in which both courts are on the first floor, with magistrates', counsel's, solicitors', and witnesses' rooms, the cells and police station being disposed underneath. The corridors and courts are top-lighted. There are twenty-two cells in



THE QUARTER SESSIONS COURT, FROM THE BENCH

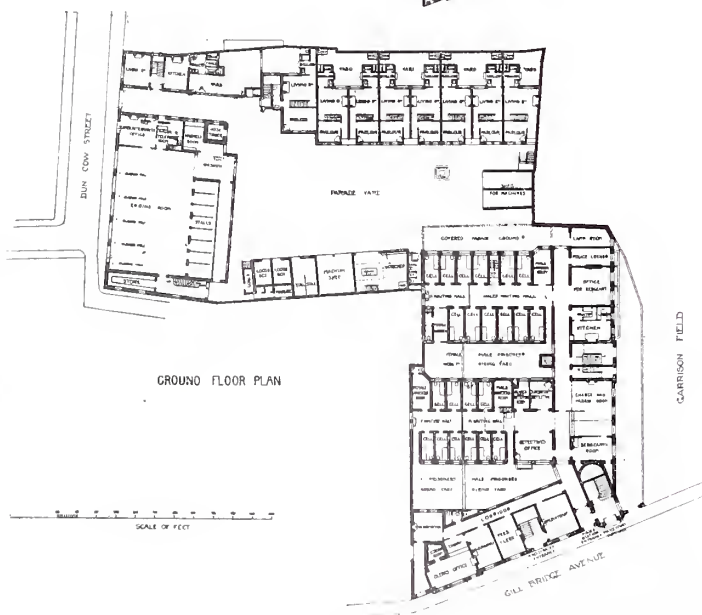
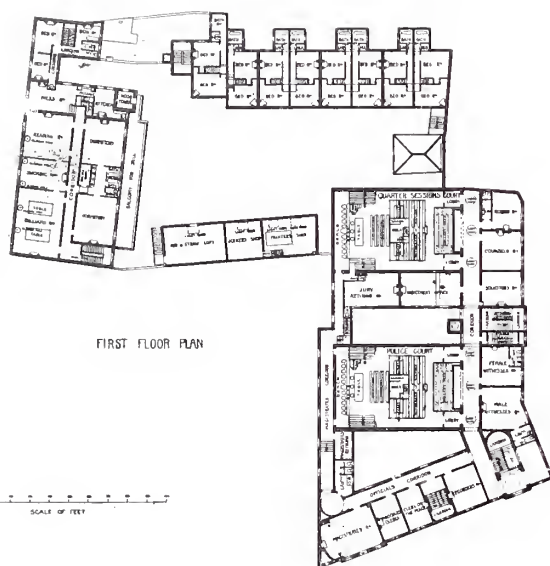
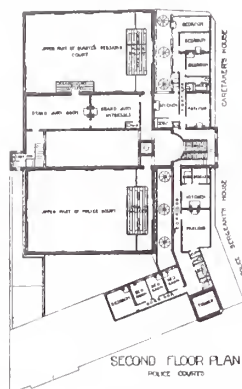
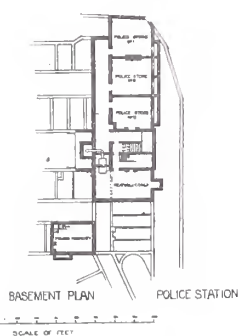
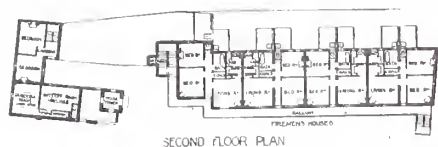
Photo: W. Parry.





*Photo : W. Parry.*





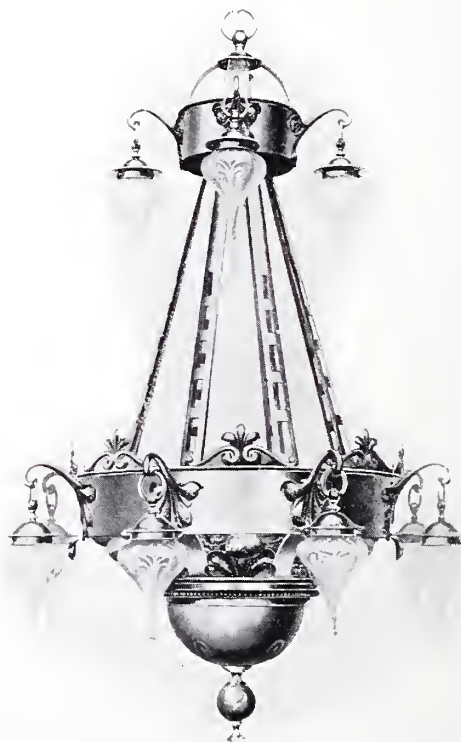
house, and a large fire station with accommodation for four engines, with dormitories and quarters for single men over.

The fronts of the police courts have been carried out in local stone, those of the fire station in brick-work with stone dressings. The woodwork of the courts and the whole of the furniture are of oak. The carving has been executed by George Haughton of Worcester.

All the electrical fittings were supplied by Samuel Heath & Sons, of Birmingham, from original designs prepared by their designers under the instructions of the architects.

The special fittings for cell-doors, cell-windows, and special opening gear for the fire-brigade stable and entrance doors, and the other door furniture, have been made and supplied by N. F. Ramsay & Co., of Newcastle-on-Tyne, Birmingham, and London.

The hardwood furniture and fittings in the quarter sessions court, police court, offices, rooms, &c., were executed by Simpson & Sons, Ltd., of Halifax. The stable fittings at the fire station, as well as the floors to the engine house and stables, were executed by Musgrave & Co., Ltd., of Manchester. Emley & Sons, Ltd., of Newcastle, carried out the heating and hot-water supply; and the fans for the court ventilation were made by James Keith, Blackman & Co., of London. The sanitary appliances were supplied by Doulton & Co., of London; and the safes by Milner & Co., of London. The fire alarm apparatus was the work of G. L. Beasley, of London.



ELECTROLIER IN THE COURTS.

the floor underneath the charge room and other offices of the police station.

Behind the police buildings is a large parade ground, houses for firemen, arranged in a three-storied block, workshops and superintendent's





*Photo : W. Parry.*





Photo: W. Parry

THE QUARTER SESSIONS COURT FROM THE PUBLIC GALLERY.

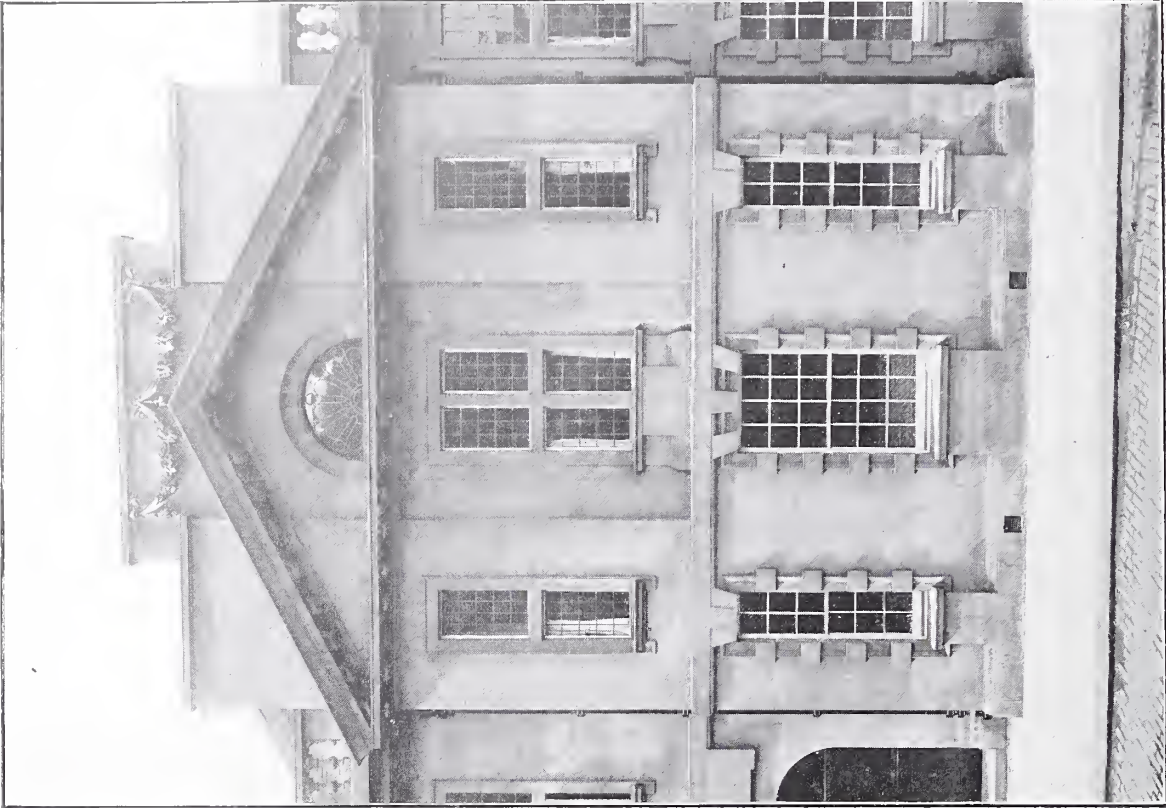




*Photo: W. Parry.*

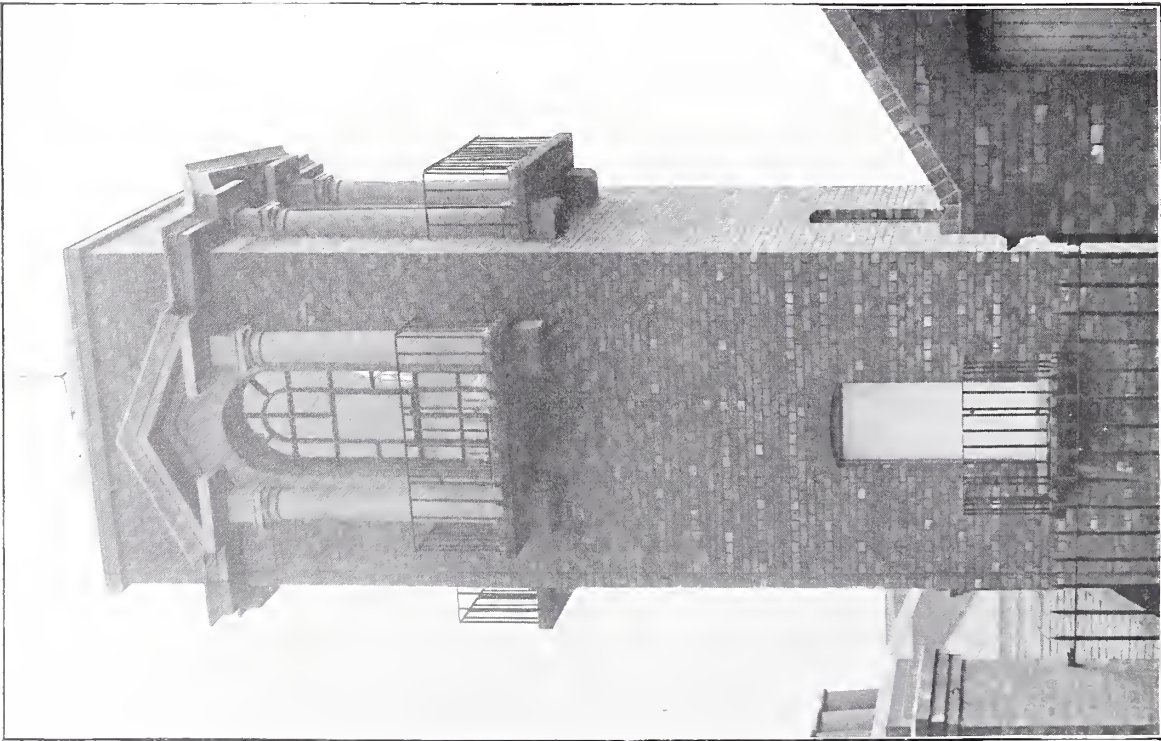
THE MAGISTRATES' ROOM.





*Photos: W. Parry.*

DETAIL OF ELEVATION IN GILL BRIDGE AVENUE.



THE FIRE STATION TOWER.



THE ARCHITECTURAL  
REVIEW, NOVEMBER,  
1907. VOLUME XXII.  
NO. 132.

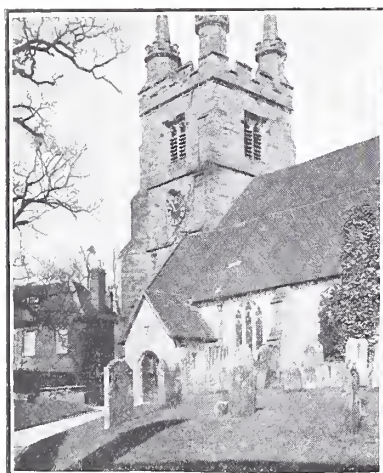




House at Penshurst, Kent.



Gateway from Churchyard to Gardens, Penshurst Place.



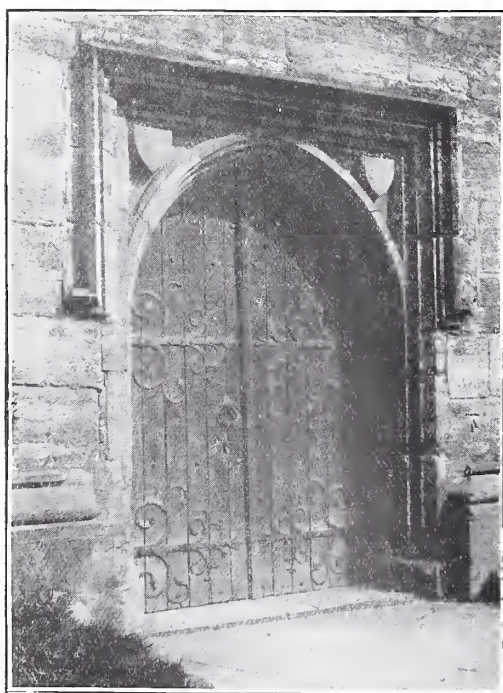
Church.



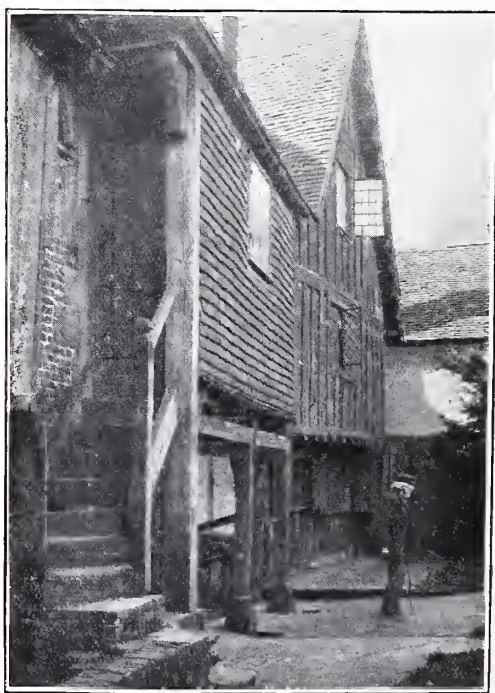
Lych-gate and Half-timber House.



Timber House in Churchyard.



West Door.



Timber House in Churchyard (Known as Lych-gate).



# Notes of the Month.

*St. Mary-le-Strand and the L.C.C.—The Further Strand Improvement Question—Models of Old London—The Winchester Cathedral Reparation—Sentiment in Architecture—Lead Rain-water Heads at St. John's, Oxford.*



THE stalwarts of the London County Council not infrequently—though unintentionally it may be—continue to make the judicious grieve. At a recent meeting Sir Edwin Cornwall deplored the existence of the Church of St. Mary-le-Strand, attributing to this little gem and masterpiece of Gibbs a blighting influence on the letting prospects of that great area of vacant land which *Punch*, in an ingenious perversion of the Council's own announcements, advertised as "This (w)hole to let as a sight (site)."

Sir Edwin's announcement can hardly be regarded as ingenuous, and in other respects it is unfortunate, for a statement that his Council had *paid* £80,000 to preserve the church is well calculated to arouse those fanatical feelings, both religious and political, with which the State Church is in these days assailed. With any political aspect we are entirely unconcerned, but in the church as a work of art we have a particular and vital interest. Buildings which are works of art are not to be lightly destroyed without a strong protest on the part of those to whose education their existence is of imperative importance. And in this connection it must be said that—remembering the constant crusade of destruction in the City—the Established Church is not the best guardian of its own treasures. To lock up money in a City church site is no more nonsensical than to invest £30,000 or £40,000 in a Velazquez or a doubtful Titian housed in the National Gallery.

Moreover, the Council has paid nothing for letting the church remain where it has always been. But for its own purposes of improvement it has apportioned a certain amount of land to widen the road on the north side of the church, and in this way we presume Sir Edwin Cornwall endeavours to justify an equivocal statement.

The origin of all these letting difficulties really lies with the Council, which started the much-needed Strand improvement scheme on the perfectly impossible basis of making the thing pay for itself. Consequently only by the most extortionate terms to building lessees can the Council hope to get back anything near the sum which the improvement has cost.

The ratepayers would have been content with a good street lined with fine buildings, even if it had cost more in the initial outlay. It is hardly to be denied that the scheme would have turned out better if the Council itself had spent another two or three millions in putting up buildings on the vacant land. The rack rentals would then have accrued to the public purse at once, and tenants would easily have been found for a street which was actually in existence, and not hanging fire as it does at present. Moreover, a fine uniform design for the frontages might have been secured, in accordance with original intentions, but all hope of this now has been abandoned.

It is obvious that if you demand costly and substantial building from a lessee you must be prepared to meet him in other ways—either by a moderate ground-rent or by a long term of lease. But the County Council wants both to eat its cake and have it. It wants costly buildings, a heavy ground-rent, and a short lease, though as the land does not go off readily the original term of 80 years has now, we believe, been lengthened to 90 or 99. Very naturally the land remains on the ratepayers' hands. Now the island sites are to be covered with palatial offices for Colonial Governments. It is an ill wind that blows no one any good. The London ratepayer will be relieved at last, and the Colonial taxpayer will have to find the money that the legitimate London trader could not afford.

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THE Further Strand Improvement Committee have received a final answer to their demand for a reconsideration of the frontage line on the northern side of the Strand, between the eastern arm of Aldwych and the eastern Spur street. We have previously given details of their proposals, which have had the support of most of the leading architects and artists of the present day. The late Council rejected these proposals on the ground that their cost was prohibitive and that the æsthetic advantage to be gained by setting back the frontage line, so that a view of the Law Courts and the buildings around was open to



anyone walking eastward along the north side, was too small to warrant the expense which it entailed. The Further Strand Improvement Committee made several attempts to get this decision altered. When at the last Council election a different personnel came into power they renewed their application, in the hope that the new body would be more amenable. The new Council, however, continues the policy of its predecessors. The last suggestion of the Committee to obviate the expense of the proposal was to eliminate the eastern Spur street and throw the land thus saved into the building site. This proposal has never struck us as a good one. If it was desirable to set back the frontage line on the north side of the Strand it should have been done on its merits. As the Council pointed out in their reply this Spur street is required for frontage purposes and for light and air. It would not, therefore, be desirable to eliminate it.

On the whole one must regret that the proposals have fallen through. There is not the faintest doubt that the view from the Strand will be exceedingly awkward, and this awkwardness will only become fully apparent when the new buildings, 80 ft. high or so, have been erected.



VERY interesting model of old London Bridge, executed to a scale of  $\frac{1}{100}$  of full size, has been made by Mr. John B. Thorpe, architect, and is one of a series of models of old London which it is intended to exhibit at the

Franco-British Exhibition next year. Among the other models are those of old St. Paul's; the entrance to the Fleet River; Westminster Hall; the Parliament House; Cheapside, &c. The model in question, which is some ten feet long, shows the bridge from the east side, and is substantially constructed in sections which can be taken to pieces for transport, as it is intended to exhibit the models in various provincial towns, and possibly in the colonies, subsequently. It has been seen by many well-known antiquarian authorities, such as Mr. Loftie, Mr. Philip Norman, who have expressed much interest in the model, and in this connection it should be stated that the purpose of Mr. Thorpe has not been to provide a sensational toy, but to build up a realistic and accurate presentation of the structures and districts of old London named, and for this purpose old books, prints, and contemporary documents of the period represented (which is that just preceding the Great Fire) have been consulted and compared, and suggestions and

advice solicited from living authorities. Figures have been kept out, though it is proposed to introduce some object into each model that will serve to give a sense of scale. We only corroborate the expressed opinions of well-known antiquarians in saying that these models will have not merely an interest for the architects, artists, antiquarians, and historians, but that they should appeal to all classes of people for their educational and instructive value.

Mr. Thorpe has in his mind a still more ambitious scheme, to present at some future time a model of the whole of old London, on a scale of about twelve feet to the inch; but such a model, apart from its initial cost, would require a large turntable base on which it could be revolved and explained to a seated audience. And the details of such an immense scheme will necessarily take a considerable time to work out. If these models will only serve to combat the growing Philistinism of the present day, and rouse the lay public to the urgent necessity of preserving those relics that still remain to us, Mr. Thorpe's painstaking work will have an added and incalculable value.



IN a letter to the *Times*, Mr. T. G. Jackson, R.A., gives some interesting particulars of the old foundations at Winchester Cathedral, where the reparation works are temporarily suspended for lack of funds. The builders under Bishop Walkelyn in the eleventh century completed their church at the edge of the boggy ground which has been the cause of all the trouble, and finding water at a depth of 10 ft., put in some ineffectual oak piles, which yielded to the weight placed on them, but not so badly as the foundations of the Presbytery and Lady Chapel built in the twelfth century under Bishop Godfrey de Lucy. Here the builders had to advance farther into the bog than the structure of Bishop Walkelyn had done. Meeting with the same difficulty of water and at the same depth, the later builders were nonplussed, and as the best solution of the problem they cut down a wood of beech trees and laid them flat as a raft, and on this the superstructure was raised.

Mr. Jackson does not doubt that the trouble of instability began almost as soon as the building was erected. The beech trunks did not decay, but they were pressed down into the soft ground no less a distance than 2 ft. 3 in., the vaulting became disorganised, pushing the walls out, and the later structure parted from the Norman building, sliding eastwards, and leaving gaping cracks at the point of separation and elsewhere. The dislocation of the vaults was so great that curves which



*Photo : C. Ellis.*

HOLY TRINITY CHURCH, KENSINGTON.

ONE OF THE LATEST CHURCHES OF THE LATE G. F. BODLEY, R.A.

should have been concave became convex, the arch construction was lost, and they would have long since fallen but for the iron bolts and straps by which they were held together and hung up to the roof.

This was the unpromising situation with which Mr. Jackson was called on to deal. The obvious remedy was to underpin and carry down to the compact gravel underlying the peat at a depth of 16 ft. Under the advice of Mr. Francis Fox, M.Inst.C.E., the water difficulty was obviated by employing divers. Bags of dry concrete were, we believe, employed for the underpinning, these setting in the water, after the manner frequently

employed in harbour and river-wall work. The foundations of the Lady Chapel and Presbytery have now been put in thorough order, the vaulting has been repaired, the ribs restored to their shape, and the walls have been grouted with cement and bonded. It is anticipated that this part of the structure will be ready for use by the end of the year.

The Norman transepts and the choir aisles are now to be taken in hand, the underpinning of the latter being already in progress; the transepts present greater difficulties. Partly owing to bad foundation, partly perhaps to injury when the Norman tower fell soon after it was built, the



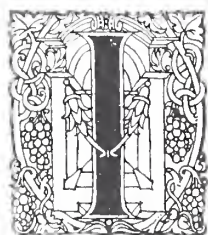
gables of the transepts overhang the bases, that of the south transept as much as 4 ft. The side walls, too, are shattered and dislocated to an alarming extent. Daylight could be seen through the fissures in the north transept, and into one corner of that part no less than 25 tons of liquid cement have been injected. Both transepts need underpinning and tying back by an elaborate system of iron rods and cramps. They are now being shored to prevent disaster, and here for the present the works are stopped for further funds.

Mr. Jackson voices the Dean's appeal for a further £60,000 to preserve the building, and says he cannot believe, if the dangerous condition of the Cathedral were generally known, that it would be left for long leaning on crutches.

\* \* \* \* \*

### SENTIMENT IN ARCHITECTURE.

*A Paper read by HALSEY RICARDO before the Architectural Association.*



Considering the quantity of communicable feeling that can be and is expressed by architecture, one has to distinguish first the poet—the maker—and view his qualities as exhibited in his materials and his synthesis of them, and then to consider the result, not only as an exposition of his own feelings, but of the far greater and more serious manifestation of the prevailing feeling of the time. And then there is his counterpart, the spectator, who is impressed first by the individual expression as something special and personal, and then, further, by its voicing the hitherto unexpressed feeling that is common to all artists of the time.

I remember, as a boy, the angry denunciation by my elders of sentiment as a factor in life; and the violence of the denunciation was a tribute to the recognised strength of the emotion and to their inability to understand and cope with it. "Avoid sentiment" was the universal cry. "Remember sentiment has no part in the practical relations of life." This antagonism to sentiment flourished most in the central years of the nineteenth century, when the hope was that men's relations to each other could be regulated mechanically and arithmetically, and amidst such an artificial and delicate equilibrium sentiment was an unwelcome and unmanageable intruder. Another view of life, another reading of history, has followed on the breakdown of this unnatural exposition of human life, and we recognise now that sentiment pervades and underlies all human action—in varying quality and varying degree,

doubtless—but it is the strongest impulse that we know of, and omnipresent.

In tracing history we discern an inexplicable force capable of overthrowing the movements of humanity, a force slowly increasing to a climax, and followed by a sharp drop; but there are records, too, of storms that arose almost on the instant—and raged with unparalleled violence. Let us take the early Crusades as an instance of a sudden enthusiasm which transcended all the conditions and habits of life at that period—an enthusiasm which at the voicing of Peter the Hermit inflamed the whole of Europe, impelling enormous numbers of men, women, and children to throw up all they had, leave the land in which they were born and the relations that were dear to them, and to set forth—unarmed, without provisions, without any thought for the future as regarded their bodily needs in the unknown, far-off, mysterious land—over sea, to encounter the Paynim and the Infidel. How can we explain this wild abandonment of the precepts and exigencies of normal life? What causes can we give that are adequate for this vehement enthusiasm?

Again, what political, economic, or social theories can explain the pitch of intense universality that art rose to in the thirteenth century? Not only was art conspicuous by its excellence throughout Europe and even in the East at this particular period, but it pervaded all the apparatus of life. The bench, the joint stool, the bow and arrows, were as much things of beauty as were the furniture and upholstery in the cathedrals and palaces. The idle chorister boy at his desk and the prisoner in the twilight of the dungeon, left their names for posterity to indulge with pity or with blame; but also (though this was never in their thoughts) for admiration at the beauty so simple a piece of scripture under such hard conditions could possess. Even if one tries to explain it by the slow preparation of the preceding centuries—which is somewhat in the nature of explaining how the elephant that bears the world is sustained by the tortoise—how shall one account for its sudden collapse? That the various arts, formerly associated together and practising more as crafts, should by this time have reached such a pitch of excellence that they should strive to specialise, to uplift their craft into independent effort, and so become developed out of their surroundings into separate exhibitions of technical dexterity, provides only a partial explanation; the impulse should have been strong enough to produce these offshoots and yet still continue its growth.

What made Greek Art perish so rapidly? How is it that Persian Art endures to this day, and yet





"WHITE WEBBS," HADLEY WOOD, FROM GARDEN.

J. LEONARD WILLIAMS, ARCHITECT.

is probably the oldest art of all that we know? We cannot answer this any more than we can say how or why the world is here. We are ignorant of the real causes of these waves of emotional action. They appear to be outside of our control, to be much greater than ourselves, and to be forces that sway nations and sometimes groups of nations homogeneously: the actual expression may come from a single individual—to take the "Recessional" of Kipling for an example—but it is the outburst of a sentiment that is pervading all people's minds at the moment. And the expression once enunciated, either in poetry, music, painting, sculpture, or architecture, becomes codified; it enters into part of our constitution and posterity's—we are never quite the same people again. Moreover, we have left in us sensations which are called forth by the recurrence of the original phenomena that created them, enabling us to respond to the passions of a time long gone, and to appreciate a sentiment which still remains like the fragrance of a plant whose growth has long since ceased.

Take, as a crude instance, the oxen who peep out of the corner pinnacles of the steeples at Laon. Up the steep acropolis their living representatives dragged, six hundred years ago, the blocks of stone that were to constitute the cathedral; and the memory of their patient service has been recorded in this way. This simple recognition of gratitude to the dumb labour

of our beasts of burden is a cry from human heart to fellow heart, audible still through the centuries.

The crosses that Edward I set up at the places where his wife's bier rested on its last journey home is another instance of the direct exhibition of sentiment—in masonry: but of individual sentiment mainly. A more conspicuous instance of sentiment mainly individualistic and expressed directly, without the usual attributes and adjuncts given in explanation, was the old Newgate Prison, where the necessary inhumanity of imprisonment was portrayed by windowless walls and immovable masses of stone. Behind those blind, deaf, blank walls, hope died—the building was brother to the grave, and the terrible kinship used to be publicly demonstrated.

But sentiment in architecture is generally of a more subtle character, and can be discerned more easily by taking epochs and nationalities rather than by individual buildings. Thus we can say of Assyrian architecture (as shown by the sculpture that has survived) that it is kings' architecture, overawed somewhat by the terrors of astrology. The formation of the cities' enclosures, the terraces and their immense cultivated spaces so guarded, seem to show that the people themselves were unwilling soldiers, whilst their kings enjoyed the best of life alternately in combat and the chase. It was necessary then to exact from the inhabitants of the city support for the throne in



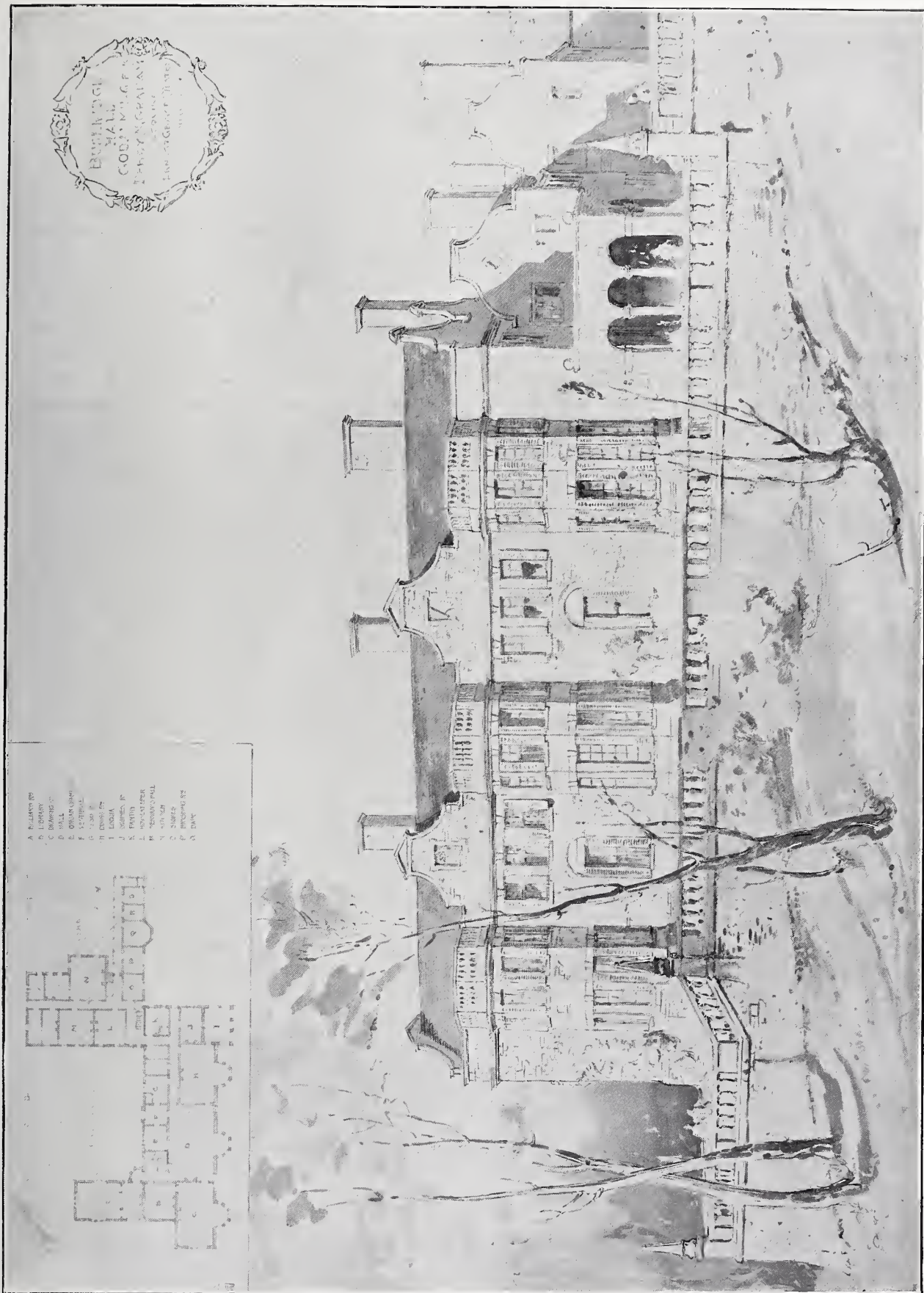
defiance of the natural inclinations of the populace, and this was done, architecturally, by withdrawing the palace into the heart of the town, by having the temple and the watch tower that pointed far into the night, for the star-gazer priests to read the dread scroll of the firmament, adjacent and surmounting it—by making hall retire within hall, by staircases and passages planned on the noblest scale, by statuary mysteriously impressive—colossal animals eloquent with inscriptions, crouching lions to carry the supports of the king's halls, and the use of colour symbolical of authority. For the kings it must have been a stirring time, and there is more practical activity and purpose in the architecture of Mesopotamia than there is in Egypt. There the main feeling is a kind of romantic quest to discover the great Quietude that shall atone for the servitude of life. It is priests' architecture in the land through which the Nile flows—the temples with their avenues of sphinxes, their pylons, obelisks, and the dark heart of the sanctuary itself, pierced on solemn occasions by the beam of the rising sun, or palpitating under the twilight radiance of the evening star. But the big masses, for the most part, seem to speak of the great justice of the world to come—the inevitableness of labour here, the orderly march of the seasons, and the great powers of the earth and sky. Besides this one discerns a strong sympathy with, and love for, the smaller domestic animals and the pleasure of portraying them as almost human beings, accepting them as of near kinship with themselves.

The architecture of the Greeks, judging by their temples and the few other memorials left in Attica, Sicily, and the coast of Asia Minor, is sculptor's architecture—is, in fact, sculpture. The masonry, the columns, the podium, the entablature, are all so much fine chiselled work—or where the material could not be the marble which they assumed was the proper one, it was crusted over with a marble stucco, moulded and carved to pass for the real thing. So little now is left of the colour that played so important a part in the complete effect that it is hard to visualise what these bleached bones must have looked like when the flesh was on them, and we approach these masterpieces of technique and subtle sense of beauty with a sophistication that has clouded us for some centuries past. Phidias, I imagine, could contemplate the present state of the Parthenon as part of the general fate of all things fashioned by human hands, but our British Museum would be unintelligible to him, outside or in. That we should so labour to collect, preserve, and restore the sculptured fragments of his day, attempt to reproduce their setting and exhibit them as they once stood in their framework of Greek architec-

ture, and then to stop short at the last moment and omit the one thing that vitalised the whole inert mass—to forego the inspiration of colour, would be inexplicable to him. On our part, so habituated are we, and have been, for the last 400 years, to the contemplation of classic sculpture, as so much form wrought out of white marble and to be admired as form only, that it seems sheer profanation to even think of these statues and their architectural surroundings as glowing with colour. Under these crippled conditions it is hard to penetrate past the inscrutable mastery of Greek work, and to win from these cold masks the story their fashioners tried to tell.

Whilst the Greeks were refiners, the Romans were constructors, concerned with the mechanics of building and contemptuous of the trimmings and haberdashery with which they made their Greek and Greek-taught craftsmen incrust their great erections. But they had a bourgeois appetite for profusion; conquerors of the world this side India, they brought to Rome all that the world held precious and rare; masters of many nations and countless numbers of slaves, they projected buildings without fear of the contractor before their eyes, buildings grandiose, colossal, sumptuous, and mostly overdecorated. The whirligig of Time has brought its revenges: the buildings of the Roman Empire have been dismantled of their costly plating, plundered for their material, treated as a quarry by the mason and the limeburner; the marbles that came from Greece, from Asia, from Numidia, have been wrenched from their setting and established in buildings throughout Europe of quite alien feeling and purpose, and we owe to the exhumation of a second-class watering-town, shoddily repaired after partial destruction from an earthquake, and fortunately preserved in cinder ash, our chief knowledge of how the Romans of the Empire lived—so far as the actual objects can tell us. We know from the few memorials left, and by dint of intelligent excavation, on what a broad scale their public buildings and spaces were planned, and we can get some idea of the profusion of marbles and colour by entering some of our last-erected restaurants and the buildings of various provident societies. Rome was a place that, if you had cash in your pocket or some influence, say, with the censor, was a well enough place to live in, but it must have been a terrible place for the poor man and the slave. Roman architecture is sheer materialism—there is no hope in it, no consciousness of any spiritual ideal. No wonder the Christian religion, with its Gospel addressed especially to the poor and the oppressed, took such sudden and widespread hold under the Roman *régime*; it was the complete antithesis to the doctrines





- A. REAR PORCH
- B. LIBRARY
- C. DRAWING ROOM
- D. HALL
- E. OFFICE
- F. OFFICE
- G. OFFICE
- H. OFFICE
- I. OFFICE
- J. OFFICE
- K. OFFICE
- L. OFFICE
- M. OFFICE
- N. OFFICE
- O. OFFICE
- P. OFFICE
- Q. OFFICE
- R. OFFICE
- S. OFFICE



current and practised in the Empire. After old Rome came the architecture of the new Rome of Constantine and the exarchate of Ravenna. The mysticism of the East, the passionate monotheism of the Hebrews underlying the metaphysical subtleties of the Christian dogmata, the imagery and superstition of the Greek mind, all mingle in the miraculous earth-bubble of Sta. Sophia. Charged with allegory, every detail significant of some legend or doctrine, every ornament a symbol as well as an instrument of service, the great dome and the lesser domes held in their hollows the chorale of the Christian faith. And every church under Byzantine influence tried to be the microcosm of the world to come. The church, too, was a sanctuary against the hostile powers that were in the underworld—the great powers of magic and of evil—and the protecting canopy that dwelt quietly over the haven of the church symbolised safety from the malice of man and devil.

Meanwhile the Northern nations were forming their own ideals of what their church should be, based on the actual buildings that they found on the soil they invaded, and influenced largely by an innate hostility against the languid fatalism of the Southern folk. There is the keen aggressive vigour of the east wind amongst these people: they fought individually, and personal emulation was a prime factor in their lives; to read of the encounters of the Goths against the Romans is to read romance; each Paladin attempts something more desperate single-handed against the imperturbable phalanx than his slain comrade beside him; it is magnificent "showing off." They fought for the devilry of it, for distinction, for plunder; they were of the breed of robbers and pirates, men of humour, poetry, and swift sensitiveness. A splendid ideal swept them off their feet; blind and deaf to what might be the impracticabilities of it, they held life lightly so long as honour was preserved. We see these qualities in their work, until the time of consolidation came, when the Normans settled down to batten on the rich lands of England, Sicily, and South Italy. There is a lofty defiance of mere building limitations in the way that they laid out their cathedrals in England. That they were too high and too wide to roof didn't trouble these master-builders; that their columns and piers were disproportionately bulky for the work they had to do, was of no more concern to them than the way they measured their gifts; whilst the carved enrichments, the reminiscences of the sculptured embroidery that they had seen abroad, give in a halting, technically imperfect, and primitive way, a playful outlook on the objects around them. The fun is massive and apt to be overcharged,

like a blow from a lion's cub, whose paws are out of proportion, large and heavy; but in early Gothic work there are smiles and tears and a feeling growing up that whilst God's justice is not to be doubted, it is not so easy to enter Heaven as their fathers thought. Whilst knights singly were scouring the country in quest of adventure, the industrial population was collecting itself into groups, independent of the baron and independent of the Church; these guilds made themselves strong enough to exact terms, charters, and privileges from their feudal lords, and we can dissociate the sentiment in their buildings—that of progress, of outshining their rivals, of wringing from their materials the last ounce of utmost—from the timid ostentation of the chantry where the magnate was to repose and to have his doom nicely proportioned to his lineage, his conduct, and the money spent in prayer to his assessors.

One might go on, age by age, attempting to appraise the characteristic sentiment of each time—how in England the home and orderly surroundings began to emerge in opposition to the castle and the predatory excursions of the baron's feudal retainers, how after the days of Richard III. the home of the castle proceeded to amalgamate, and the revival of letters, helped by the printing press, showed the aristocracy that there were other modes of gaining distinction besides personal bravery in contest—especially since the use of gunpowder in warfare tended to eliminate the personal element and to advance the value of well-disciplined, concerted action. The nobles merged their showy bravery into theatric entertainments of pageantry, and the Renaissance movement lent itself readily to the enlarged scale of reception-rooms and to the investigation of the grandiose days of the Roman Empire. The personal note of the architect appears; literary culture concerned itself more with the history of heroes and individuals than with peoples; the arts had already begun to distinguish themselves from the crafts, and had assumed a superiority which was exercised in directing and dominating the latter, till we get a complete divorce between the artist and the artificer, and a standard of execution that is largely gauged by antiquarian knowledge—scholars' architecture appears. Louis XIV. would be a Roman Emperor, and he lays out his palace and park at Versailles in a way and on a scale to eclipse the works of Trajan.

The polite man of letters, like Lord Chesterfield, affected the carriage of a pro-consul, consulted his Vitruvius, was concerned over the architectonic equilibrium of his house and its appurtenances: the kitchen wing balanced the stable wing, and everything that was disorderly or derogatory to the trim decorum of the elevation was kept in the



side enclosures and screened by a high wall. Scholarship by and by stiffened into pedantry in architecture, and towards the end of the eighteenth century the whole train of thought, political, social, and economic, grew into rebellion against the rigid formalism of the time. In architecture, the outburst showed itself in the Gothic revival; the cold-hearted canons of correctness were replaced by other canons of equally desired correctness, but besides there was the Crusader's fervour. But he was a knight errant with no squires to support him; the workmen understood nothing of the quest, could do nothing to help him, could merely carry out passively his directions, given in writing. You may put the clock back and still register the time—the early Renaissance folk did that—provided the works are in order and going; but this was a case of setting back the hands of a stopped clock and pulling at the weights yourself. But the consequences of this outburst of generous passion, though they failed in the particular direction where their efforts were expected to show and progress, were not lost. They took the shape of a larger humanity, of the responsibility of man to his fellows in other aspects besides those of crime and disease, resulting in the erection of schools of all sorts, public libraries, public halls and galleries. Moreover the treatment of disease and infirmity (owing to the development of medical knowledge and surgery) took on a more humane aspect, and this sentiment of pity for the

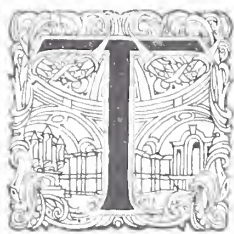
weak is expressing itself in our hospitals, infirmaries, and asylums. At present our attitude is to deal with the sheer bones of the question and to determine them, with some principal muscular attachments: the flesh clothing is to come when we are more experienced, and consequently more able to provide it. But for the moment, so far as we can manage it, we will allow no one to start on life's race handicapped by ignorance, nor shall he be crushed against the wall owing to disablement by weakness and pain. The board schools form a handy illustration of this sentiment; they form the structural summary of the many problems and researches into educational ideals and systems that have been occupying the minds of our serious thinkers on this question, and they constitute, perhaps, the most significant and most interesting class of buildings that have been erected in our time.

To-day we live in the days of a tolerant, kindly sentiment towards our fellow men, but this is no stuff to raise fine architectural conceptions. We live in times of security to person and property; the great work of the past was done under quite different conditions, but we rejoice in our placid security, we are without the tonic that puts the nerves in quivering tension. We quit ourselves like men, but in other guise; for sentiment in the architecture of our time we must look now for a wider, more universal feeling, than what has been shown for the past thousand years.



HOUSE NEAR STOKE POGES. C. F. A. VOYSEY, ARCHITECT.





THE lead rain-water heads of 1630 at St. John's College, Oxford, are notable not only by reason of their delightful shapes, but also and especially for their colour decoration. I believe I am correct in saying that the illustrations now given show the first telephotographs of them which have been taken, and they emphasize with sufficient clearness the painted patterns.

Some years ago when St. John's underwent restoration the pipe heads were taken down for repair, and Mr. F. W. Troup with painstaking care traced and renewed the old painting. Of this there was enough remaining to make its accurate restoration a certainty and not a speculation. There are four heads of the shape now illustrated, two with the Royal arms, and two



LEAD RAIN-WATER HEAD, ST. JOHN'S COLLEGE, OXFORD.

like the simpler pattern (though with slight modifications), and bearing the arms of Archbishop Laud. The painting is in black and white, except in the case of the arms, which are gilt and blazoned in their proper heraldic colours. In the case of the more elaborate head the supporters of the Royal arms are most happily placed and the pierced valances add considerable grace. This head was reproduced by Mr. Lutyens on the English Pavilion at the last Paris Exhibition, and may indeed be regarded as peculiarly representative of the art of the seventeenth century leadworker. In the corners of St. John's Quadrangle are four oblong heads with cornices and shields of arms, but I imagine these to be of later date than 1630.

This brief return to historical leadwork is by way of comparison with the modern leadwork with which I am dealing elsewhere in these pages.

LAWRENCE WEAVER, F.S.A.



LEAD RAIN-WATER HEAD, ST. JOHN'S COLLEGE, OXFORD.



# Modern Leadwork.

## I.—ITS LARGER USES IN ARCHITECTURE.



THE study of the present state of the art of leadwork is interesting, not only because it is markedly alive, but also in that its revival has produced some uses which are very proper to the material and have little historical precedent.

As far as I know, Mr. Ernest Newton is to be credited with the first use of lead for sheeting brickwork, as shown in Figs. 2 and 4, and his very happy example is being somewhat widely followed.

Diligent search has failed to reveal any historical examples which form a fair comparison.

The employment of lead for the protection of timber is another story, but the great leaded timber buildings are chiefly in the limbo of history, and there are gaps and uncertainties in building records which make it difficult accurately to establish uses. Mr. Starkie Gardner, in his admirable paper on "Lead Architecture,"<sup>1</sup> sought to prove that the chief glory of Nonsuch Palace was in the decorative leadwork, and rather scoffed at the idea that the modelled panels, which appear in Hoefnagel's view, were of any sort of plaster. Mr. Maurice B. Adams, in a note in the *R.I.B.A. Journal*, says that "Pepys describes the building as *sheeted* with lead." That is hardly the case. I now set down Pepys' own words, and, in parallel column, the description of Nonsuch by a much more competent observer, John Evelyn.

### PEPYS' DIARY.

1665. Sept. 21.

"... Walked up and down the house and park; and a fine place it hath heretofore been, and a fine prospect about the house. . . . And all the house on the outside filled with figures of stories, and good painting of Rubens' or Holben's doing. And one great thing is, that most of the house is covered, I mean the posts and quarters in the walls, covered with lead, and gilded.

"I walked into the ruined garden . . ."

### EVELYN'S DIARY.

1666. Jan. 3.

"I supp'd in None-such House . . . and tooke an exact view of the plaster statues and bass relievos inserted 'twixt the timbers and punchions of the outside walles of the Court; which must needs have been the work of some celebrated Italian. I much admired how it had lasted so well and intire since the time of Henry VIII., expos'd as they are to the aire: and pitty it is they are not taken out and preserv'd in some drie place; a gallerie would become them. There are some mezzo-relievos as

(Note.—Nonsuch Palace, near Epsom, was in sufficiently good repair at this time for the Exchequer to be moved there during the Great Plague. It was Exchequer business which took Pepys to the Palace.—L. W.)

big as the life, the storie is of the Heathen gods, emblems, compartments, etc. The Palace consists of two courts, of which the first is of stone, castle-like, by the Lo. Lumlies, the other of timber, a Gothic fabric, but these walls incomparably beautified. I observ'd that the appearing timber punchions, entrelices, etc., were all so cover'd with scales of slate, that it seem'd carved in the wood and painted, the slate fastened on the timber in pretty figures, that has, like a coate of armour, preserv'd it from rotting."

I think these two extracts should be read together. Pepys only claims lead-covered posts, and is quite silent about lead panels. There is no evidence that his story of Rubens and Holbein providing the exterior paintings contains a word of truth; but, in any case, it is evidence for something very different from cast lead panels. Evelyn is definite about the plaster statues and reliefs, and his "scales of slate" abolish lead covering even for the main timbers.

Where there is a conflict of testimony, we must consider credibility of witnesses. Pepys was an acute observer, but of men and manners rather than of buildings. Evelyn's architectural taste was highly trained by long residence in Italy, and his general accuracy of observation and his detailed description of Nonsuch make me hesitate to reject his evidence.

I would gladly give leadwork the benefit of any doubt, but even if we accept the leaded posts and quarters of Pepys, and assume a slate-like scale-like treatment for their leading, I think we must reject any idea of lead statues and reliefs.

The evidence from Stowe that Mr. Starkie Gardner brings as to the lead panels on Goldsmith's Row, Cheapside, is explicit. In the view reproduced in Fig. 3, the "Woodmen riding on Monstrous Beasts" are unhappily covered by the draperies hung out for the royal festivities, but the two long panels with scroll ornament (to the left of Cheapside Cross) may be taken to have been of modelled cast lead.

So much by way of historical comment will, I trust, be pardoned, and I now return to the modern work.

<sup>1</sup> *Journal R.I.B.A.*, Third Series, Vol. XI., No. 6.





FIG. 1.—INSURANCE BUILDING, PALL MALL.

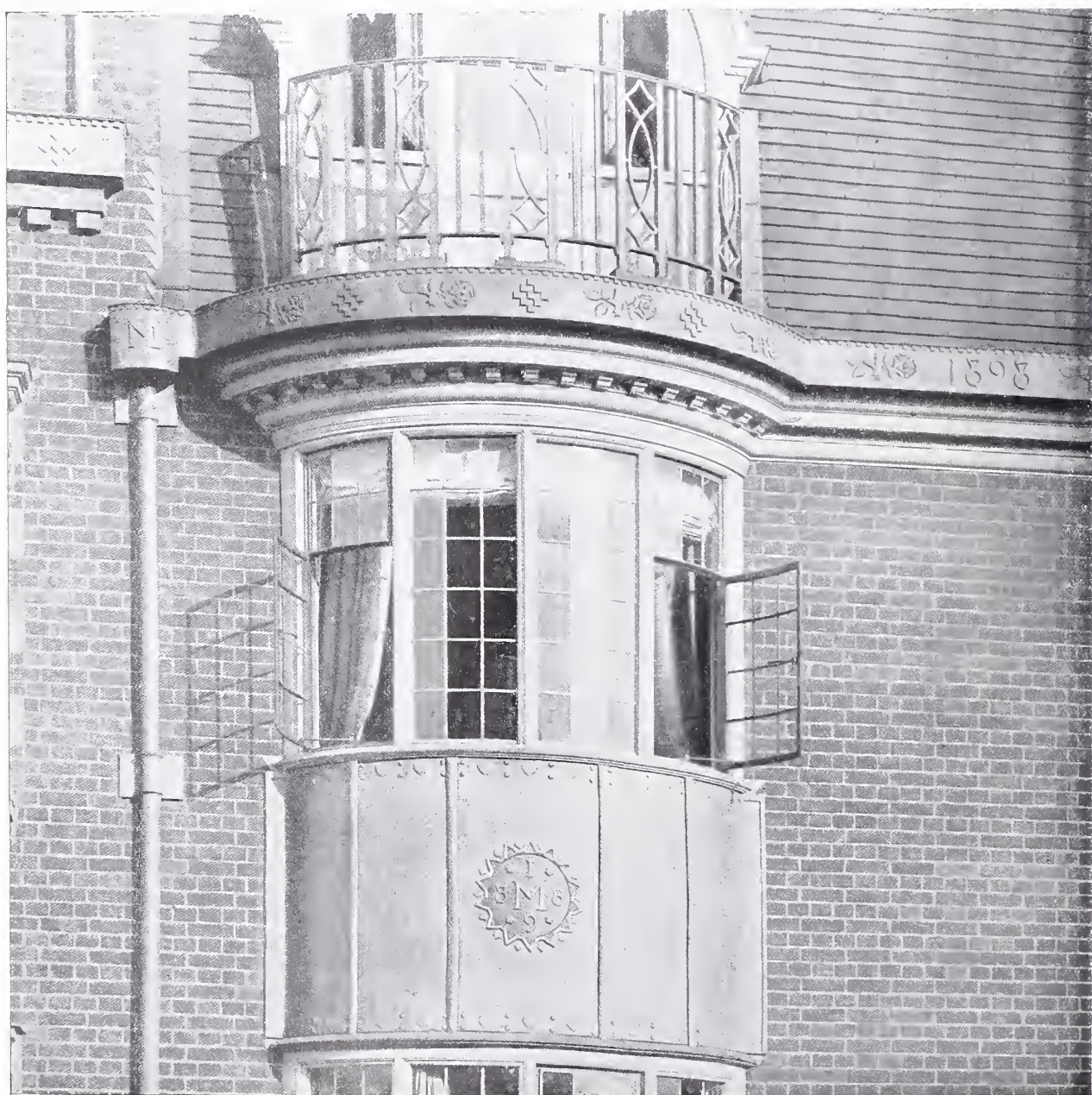


FIG. 2.—MARTIN'S BANK, BROMLEY, KENT.



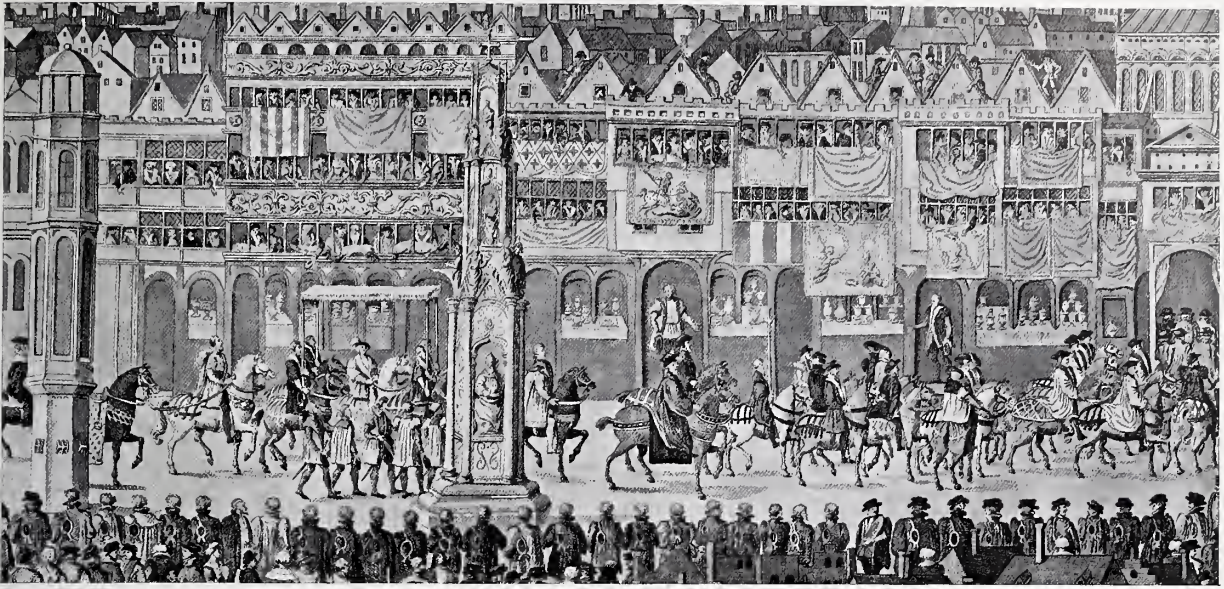


FIG. 3.—FROM AN ENGRAVING OF THE PROGRESS OF EDWARD VI.  
(Reproduced by permission of the Society of Antiquaries.)

The charm and value of Mr. Newton's handling of the lead sheeting at Bromley and Haslemere are greatly increased by the skill with which he has brought this unusual treatment into relation with the normal uses of lead for gutters, heads, and down pipes. Particularly is this the case at Redcourt, Haslemere, where the sheeting of the circular bay beneath the gutter has an effect entirely natural and even inevitable.

The decorations on the gutters are of that simple unaffected sort which accords best with any extensive use of lead.

One is ordinarily a little tired of heart-shaped ornament, but it should be remembered that Mr. Newton was employing it before the dreary vagaries of New Art had made this natural outline wearisome. The heart outline was moreover consistently favoured by plumbers in the seventeenth



FIG. 4.—REDCOURT, HASLEMERE.



and eighteenth centuries, and may be regarded as traditional in leadwork. The work was done by Messrs. Wenham & Waters.

The main ornament on the Haslemere bay is more ambitious than at Bromley, and has been vigorously coloured.

Mr. Newton has employed the quite straightforward medium of oil paint, and has therein departed from the older method. I am not happy at the use of oil paint on leadwork, as it altogether veils the texture of the metal. Perhaps a better way is to have transparent colours, such as madders, ground in a wax medium and painted direct on the lead, the whole being afterwards treated with parchment size. Brilliance is increased if the lead be tinned or gilt before the colour is applied, and initial gilding will add to the effect, even if the colour to be used is solid—*e.g.*, vermillion. For any colour treatment except gilding, which is always satisfactory, a reasonably clean country air is needful; in a smoky town the colour, however applied, will mock the effort in a few months.

Mr. Guy Dawber has heavily gilt the delightful leaded parapets to the bays of his Insurance



FIG. 5.—SANDROYD SCHOOL, COBHAM.

Building in Pall Mall, and the brilliance of the interlaced ornament is of very happy effect (Fig. 1). Here the lead is fixed on a concrete backing 4 in. thick. This work was done by Mr. Bankart, as was the simple bay sheeting of Fig 6.

Another example by the same hand is shown in Fig. 5. It is at Sandroyd School,

at Cobham. The ornament on the vertical bands is very like that of Fig. 6 in character, but an added delicacy is given by the slight pierced valance on the under side of the gutter. This piercing is taken up on a more elaborate scale for the rain-water head adjoining. In the ordinary way the restrained use of ornament, such as the latter example indicates, is the best treatment, but the general richness of detail of the Pall Mall building demanded a greater elaboration, and the result is eminently satisfactory.

Lack of space forbids me to illustrate Messrs. Niven & Wigglesworth's lead sheeting at the Sailors' Institute in Commercial Road, E. The objections to this treatment made by the District Surveyor may serve as a warning, and as an explanation why it is not more generally used.



FIG. 6.—LEAD SHEETING FOR BAY.





FIG. 7.—THE DRAGON OF WALES. CARDIFF LAW COURTS.

Although there was a thick coke-breeze concrete backing to the leadwork, great difficulty was made before the wood rolls were approved. Fire prevention is a good thing, but it may become a fetish. Probably, however, simple seam rolls without wood core would prove quite practical, though likely to be more costly, as involving very difficult plumbing. This work was done by Mr. Hunt of Hoddesdon in cast sheet. For any such purpose the milled sheet lead of commerce is a hopeless, textureless, pasty material to be avoided at all costs.

There is some tendency to return to the methods of the seventeenth and eighteenth centuries in the use of lead figures on buildings, of which Marcus

Aurelius on the archway and the gay lady sitting on the parapet at Wilton are good examples.

The biggest decorative work in cast lead ever done in this country, as far as I know, is the great dragon on the New Law Courts at Cardiff. It is 8 ft. high and weighs 4 tons. The model was made in clay by Mr. H. C. Fehr for Messrs. Lanchester and Rickards, and the plaster cast of this model was used by Messrs. Singer of Frome as a pattern for reproduction in lead. It was cast in ten pieces and soldered together. It is a lively piece of modelling, and a bold essay in massive heraldry; but as to its fitness to crown so admirable and sober a building as the Cardiff Law Courts



there is room for grave doubt. One could wish that the national aspirations of the Principality had been satisfied by some less disturbing presentment of the Dragon of Wales. Though lacking both the desire and the qualifications to pose as a critic of sculpture, I feel that this writhing monster, while it illustrates Mr. Fehr's brilliant abilities, is a little too suggestive of the *Bad Child's Book of Beasts* to harmonise with its habitation. As to the fitness of casting such a detail in lead there is, however, no doubt. The character of the subject forbids stone, bronze would be a wastefully costly material for work so far removed from close view, and the architects are to be congratulated on reviving a good tradition by employing lead.

A trio of amorini upholding a burden is an old enough, but always attractive, device. At Hampton Court the terminals of the piers of the flower-pot gate are delightful groups in lead bearing trophies of fruit. The group shown in Fig. 8 has strong characteristics. It was designed and executed by the Bromsgrove Guild from rough sketch suggestions made by Mr. J. J. Burnet, architect. A pleasant feature of the scheme is the encircling of the openwork globe by a band decorated with the signs of the zodiac. These, and indeed all the details, are freshly and agreeably modelled, and with the softness appropriate to leadwork.

The Bromsgrove Guild were also employed for the two delightful figures at Barnet Court (Mr. Arnold Mitchell, architect) shown in Figs. 12 and 13, and for the angel for a lych-gate (Mr. W. E. Webb, architect) of Fig. 15.

The little people at Barnet Court are tenderly done. The sportsman with his acute hound is evidently bent on very moderate bloodshed, while his little sister is actively concerned for the comfort of her frog. They are both admirable and look the better for being in their brick niches. The Lady of the Lych-gate (Fig. 15) is hardly so successful. Perhaps it is a fad to cavil at lady-like angels, but if the unseen ministers are to be represented as markedly of one sex or the other, there seems more justification for a male tendency. It must be admitted, though,



FIG. 8—AMORINI UPHOLDING GLOBE.

that the artist in this case is on the side of the big battalions, as the modellers and limners of angels are, for artistic purposes, almost universally feminist. Figures of this type are peculiarly suited to lead, as there are no outstretched arms to run the risk of damage or collapse.

Mr. Arthur T. Bolton has made very effective use of leadwork at the new Hamburg-America Steamship Offices in Pall Mall. Fig. 10 shows the complete dome and Fig. 11 an enlarged picture of one of the Tritons.

For the covering of the dome and obelisk sheet-lead, cast in sand, 7 to 8 lb. per foot, has been used, and this part of the work has been done by Messrs. Dent & Hellyer. The smaller gussets between the main ribs are in one piece, and in the larger gussets there is a central welt uniting two sheets. The welt is recessed at the back of the big boss, which is of beech with the lead sheet beaten over it. The joint between the dome and





FIG. 9.—INGRAM HOUSE.



FIG. 10.—HAMBURG-AMERICA OFFICES.



FIG. 11.—HAMBURG-AMERICA OFFICES.



FIG. 12.—BARNET COURT.



FIG. 13.—BARNET COURT.





FIG. 14.—WESTMINSTER CATHEDRAL.



FIG. 15.—FIGURE FOR LYCH-GATE.



FIG. 16.—GAS PENDANT.

the boss is wiped. The base of the obelisk is a large collar wrought in one piece. This required very careful work in contracting the lead to form the neck between the circular flange bossed over the ribs and the square base of the obelisk. There is one vertical seam only to the obelisk, and the raised bands cover the horizontal joints. The vane is in cast bronze. The Tritons were modelled by Mr. W. Fagan and cast in lead by Signor Petretti. The whole composition is successful. There is enough life in the Tritons to make them interesting, but they are sufficiently subordinated to the whole to prevent any sense of restlessness.

The figure of Apollo at Ingram House, Stockwell, is another excursion into architectural leadwork by Mr. Bolton. The sun-god and his attendant eagle and owl are cast in one piece, which measures about 6 ft. in width, a considerable casting. It is stiffened at the back by iron bars which are sunk partly in the lead and partly

in a cement backing. The nimbus was cast separately and its rays were ridged to secure the needed stiffness. The modelling and casting were done by Mr. Fagan and Signor Petretti.

The late Mr. Bentley was an enthusiast in lead-work, and the interesting lead cross, 8 ft. high, on the choir roof of Westminster Cathedral (Fig. 14), with its emblems of the Passion, repays study. It was made by Messrs. Matthew Hall & Co. The dome of the Campanile is a most refined work. The Westminster domes were covered with teak boards painted two coats before the lead was laid. Teak is better than oak for such a purpose, as the acids in oak, especially when it is imperfectly seasoned, will eat lead away rapidly. As far back as the sixties Mr. Bentley built the little chapel of the Convent of the Nuns of the Perpetual Adoration at Taunton, indeed it is one of his earliest works. The flèche is surmounted by a leaden figure of an angel in the manner of the great French roof-builders, and I



rather regret that the flèche itself is shingled instead of being leaded. There is a lead spirelet on the church at Watford which Mr. Bentley designed, slender, and in delightful contrast to the massive flinty tower.

Mr. Charles Hadfield, F.R.I.B.A., of Sheffield, is a discriminating admirer of the architectural uses of lead. In 1866 he put up on a church at Mount Pleasant, Liverpool, a lead angel. In this case the French practice was followed of carving the figure in wood and beating the lead over it. Since then Mr. Hadfield has been using lead freely, and has rendered the further service of preaching widely the unwisdom of the too usual periodical repainting of pipe heads, &c., a practice as needless as it is foolish.

The late Sir Gilbert Scott in his leaded spire at Lynn made a notable departure from traditional design with results not encouraging. He introduced large pointed-headed windows with mullions on four faces of the spire, and thus broke up the general effect. The early leaded spires such as Long Sutton were unbroken save for such small openings as are needful for ventilation. The later spires of the Renaissance were mostly provided with large lantern openings. The spire at Lynn effects a compromise which enjoys the merits of neither type.

Unusual as pieces of ecclesiastical leadwork are the gas pendants shown in Fig. 16. They are to the design of Sir Charles Nicholson for the Catholic Apostolic Church, Gordon Square, W.C., Lockerbie & Wilkinson of Tipton being the makers. The whole of the work except the piping is in cast lead gilt. For bowls, such as the lowest feature of the pendant, cast lead is a much better material than repoussé brass or copper (which are ordinarily used for such work), for these when pierced have a thin and papery look.

The cupid of the heavy legs (Fig. 17) is a pleasant archer, though he looks rather middle-aged. He serves as a finial on a reed-thatched summer-house at Kinfauns Castle, Perth, and was made

by Mr. Charles Henshaw of Edinburgh for Mr. F. W. Deas, architect.

The heavy legs are a wise precaution. Van Nost at the beginning of the eighteenth century was the greatest creator of lead amorini, and where he adventured on thin legs time has crushed them.

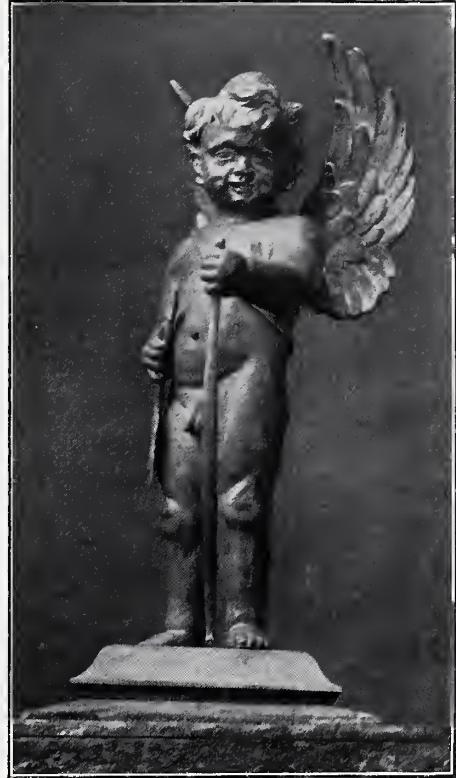
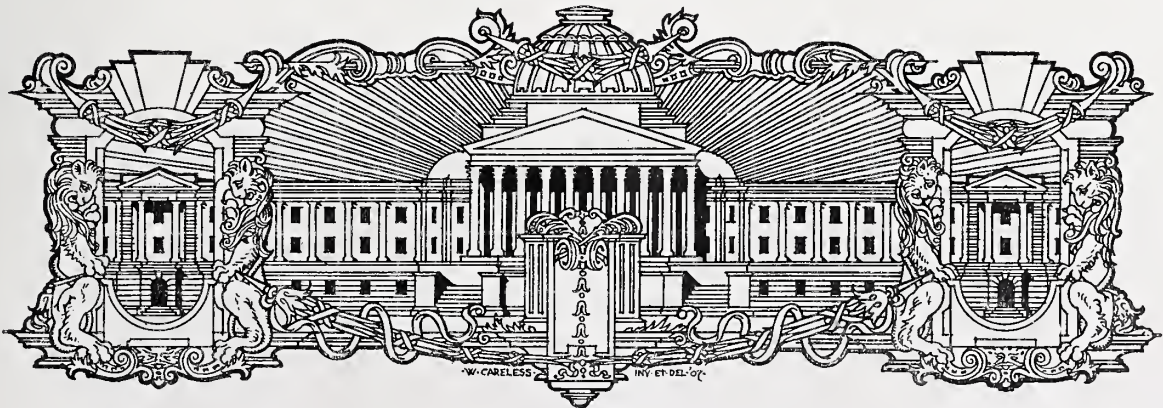


FIG. 17.—CAST LEAD FIGURE:  
FINIAL ON SUMMER HOUSE,  
KINFAUNS CASTLE, PERTHSHIRE.

Many of his cupids, however, stand firm on sturdy legs like those of Mr. Henshaw's boy. The wings stand out rather too freely for leadwork, which should always have the maximum of possible support, both to prevent actual collapse, and to avoid the appearance of this risk.

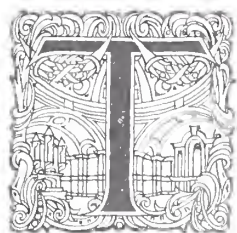
LAWRENCE WEAVER, F.S.A.

(To be continued.)





# The Late G. F. Bodley, R.A.



THE death of Mr. Bodley, which occurred on October 21, has removed from the foremost rank of his profession not only an artist of high talent, but a dignified and picturesque personality, to whose admitted pre-eminence in his chosen field of ecclesiastical architecture we have long been accustomed. Born in the early years of the second

during the period of pupilage in a somewhat dry and academic convention of English Gothic, it was natural enough that he should begin his independent career with a revolt. His earliest buildings show a leaning towards French rather than English types, but are marked by a freedom of handling and independence of thought that give them extreme interest. They bear indelibly the stamp of character, of individual style.

For some time before his partnership with



quarter of the last century, Mr. Bodley grew up with the Gothic Revival, his professional training was imbued with the fervour of its first enthusiasm, and the period of his maturity was that of its fullest and most pervasive acceptance.

At this moment, when his actual personal activities have but just ceased, it is almost startling to remember that he was the first pupil in the "forties" of Sir Gilbert Scott, to whom he served a five years' apprenticeship, living, as was the custom of the time, in his master's house. Schooled

the late Mr. Thomas Garner Mr. Bodley's handling of Gothic architecture had begun to show evidences of a change of sentiment—French types were rapidly giving place to English, and the strong leaning towards the English fourteenth-century or "Decorated" manner, which is so markedly characteristic of all his subsequent church designs, was rapidly developed in the early "seventies." His Gothic for the last thirty-five years was always his own peculiar version of the "Decorated" manner, but



that manner had been so intensely assimilated as to become a free personal expression, whose strong individuality is always evident. His delight in colour and love of applied decoration, which never abated to the end, led him into elaborations of pattern-painting and of gilding on wall and roof, on screens and furniture, which seem sometimes to mar the quiet dignity of proportion and stately lines of his interiors. He decorated innumerable churches and houses, and in all buildings originated by him foresaw and prepared for the ultimate colour scheme of the interior from the first.

In the days of his pupilage, as in his subsequent career, he always pursued an independent course, and never formed the habit, usual with young architects, of sketching and measuring. After the first years of his apprenticeship he measured little and sketched not at all. For records of the innumerable buildings that he observed and studied, he relied, and with good reason, upon a marvellously accurate and retentive memory. He was never, in the usual sense, an accomplished draughtsman, his drawing was a mere means to his ends; but his detail drawings were strong, sensitive, and admirably fitted to their purpose.

His love of mediæval art was intense; it amounted, indeed, to a passion, and was only rivalled by his extreme devotion to music. A poet in temperament and actual gift of verse (he published a little book of poems in 1899), he had a great distaste for all matters of routine, he detested the business, as distinct from the art, of architecture, and hated, with a whole-soul abhorrence, the preparation of reports and specifications, the examination of accounts, and the writing of business letters. Shy, reserved, and sensitive, he shrank from publicity, and always avoided, as far as he could, speeches, lectures, or official functions. Few people knew him intimately, but to those who had that privilege he was expansive and delightful. Invariably courteous to all, with an old-fashioned grace of his own, to strangers whom he found sympathetic he was friendly and charming. He was a genial and kindly host, and presided with enjoyment and dignity over the banquets of the Fishmongers' Company during his year of office as Prime Warden. He had ever the courage of his convictions, and his convictions were undying. Courage, indeed, was one of his leading characteristics, and combined with his remarkable patience and self-reliance enabled him to bear the painful lameness, the result of blood-poisoning, which assailed him in middle life and never left him. In his previous years he was physically strong and active. Tall, well-built, and athletic, he had been a keen cricketer, an untiring walker, and an ardent fisherman. In spite of his afflic-

tion he did not shrink, even in his old age, from long and tedious journeys, from constant and arduous work. In the autumn of last year he travelled to the United States to inspect the site of the new cathedral at Washington, for which he has left plans and working drawings, collaborating with an old pupil, Mr. Henry Vaughan, of Boston. This is one only of the cathedrals with which he was busy in this his last year, San Francisco, Negpur, and additions to the Cathedral of Lahore, to say nothing of his co-operation with his godson, the son of his old friend, George Gilbert Scott, upon Liverpool Cathedral. He had been, to the eyes of his friends, obviously ageing and failing in health for the past few months, but his indomitable spirit kept him up, and his wonderful output of work was sustained to the very end. He has died indeed full of years and of honours, but his honours for the most part came late. For some twenty years an associate of the Royal Academy, he only received full membership in 1902. The Royal Gold Medal was awarded to him in 1899, and that of the American Institute was subsequently bestowed on him. In June of this year Oxford awarded him the honorary degree of D.C.L., a recognition which he greatly appreciated.

He died in the beautiful old stone-built Manor House at Water Eaton near Oxford, where for the last year of his life he had lived and worked. His end was sudden, calm, and painless, and seemed a fitting close to sixty years of active work and devotion to his art. Possessed of strong will and steady nerves, he maintained, amidst the inevitable worries of practice, and the pain and depression of recurrent ailment, an extraordinary tranquillity and detachment of spirit. He never permitted himself to be hurried or worried. His quiet determination, personal dignity, and great knowledge were difficult to resist, and he generally succeeded in bringing clients or committees to his own point of view. His long life was a very full one, and he leaves abundant evidences of his industry. Whatever judgment may be formed of his work, and, like all work, it is open to criticism, it will never be found to lack distinction and character, or to fail for want of care. He bestowed ungrudging pains even upon its minutest details, and maintained a consistently high standard. His aim was never to startle. The eccentric, the obviously ingenious, were as remote from his ideal as were self-conscious abstentions and painfully-elaborated simplicities.

There is a pathetic interest in the fact that his last completed design is that of a tomb for his old friend and former partner, Mr. Garner. His age was just short of eighty years.

EDWARD WARREN.



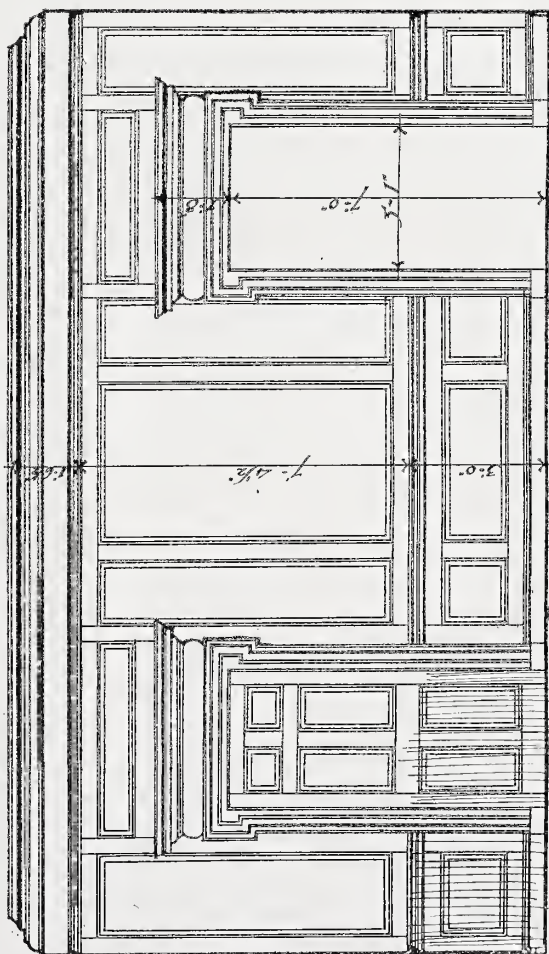
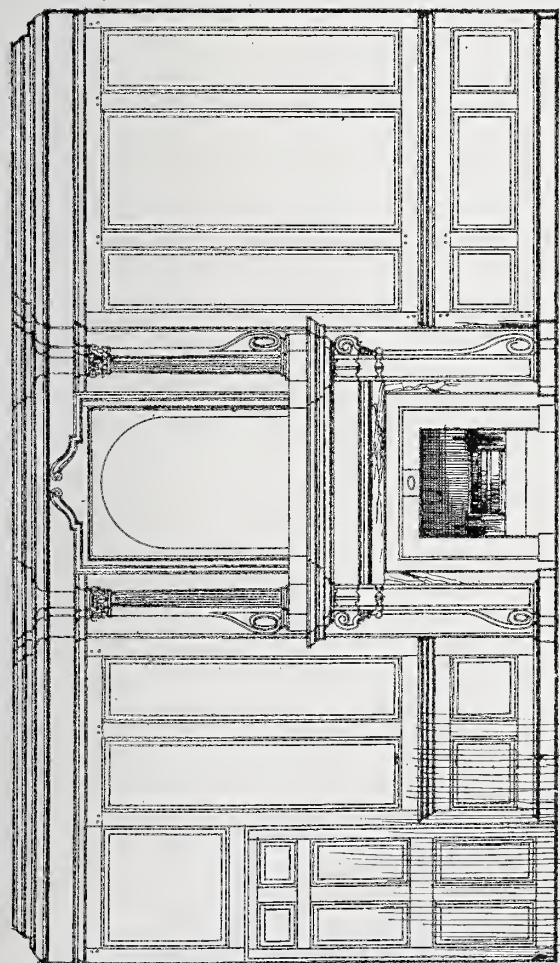
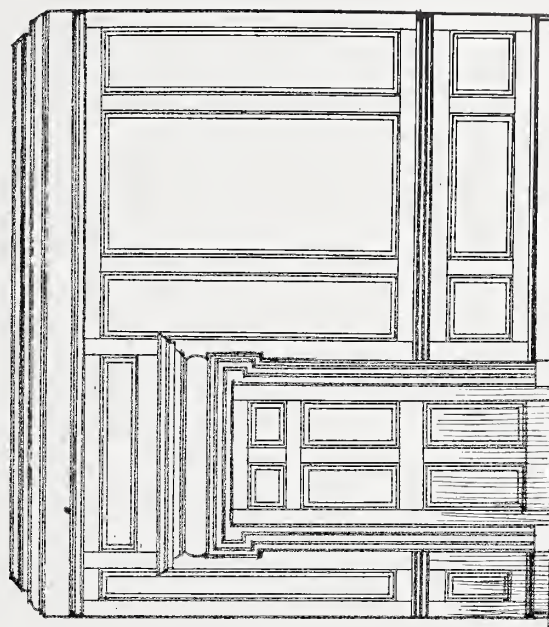
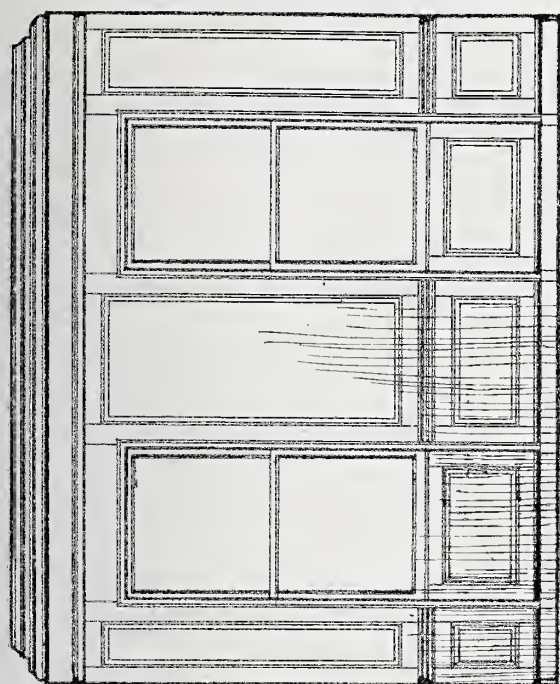
# The Practical Exemplar of Architecture—XVII



26, HATTON GARDEN, LONDON. DOORWAY IN MUSEUM.

*Board of Education.*

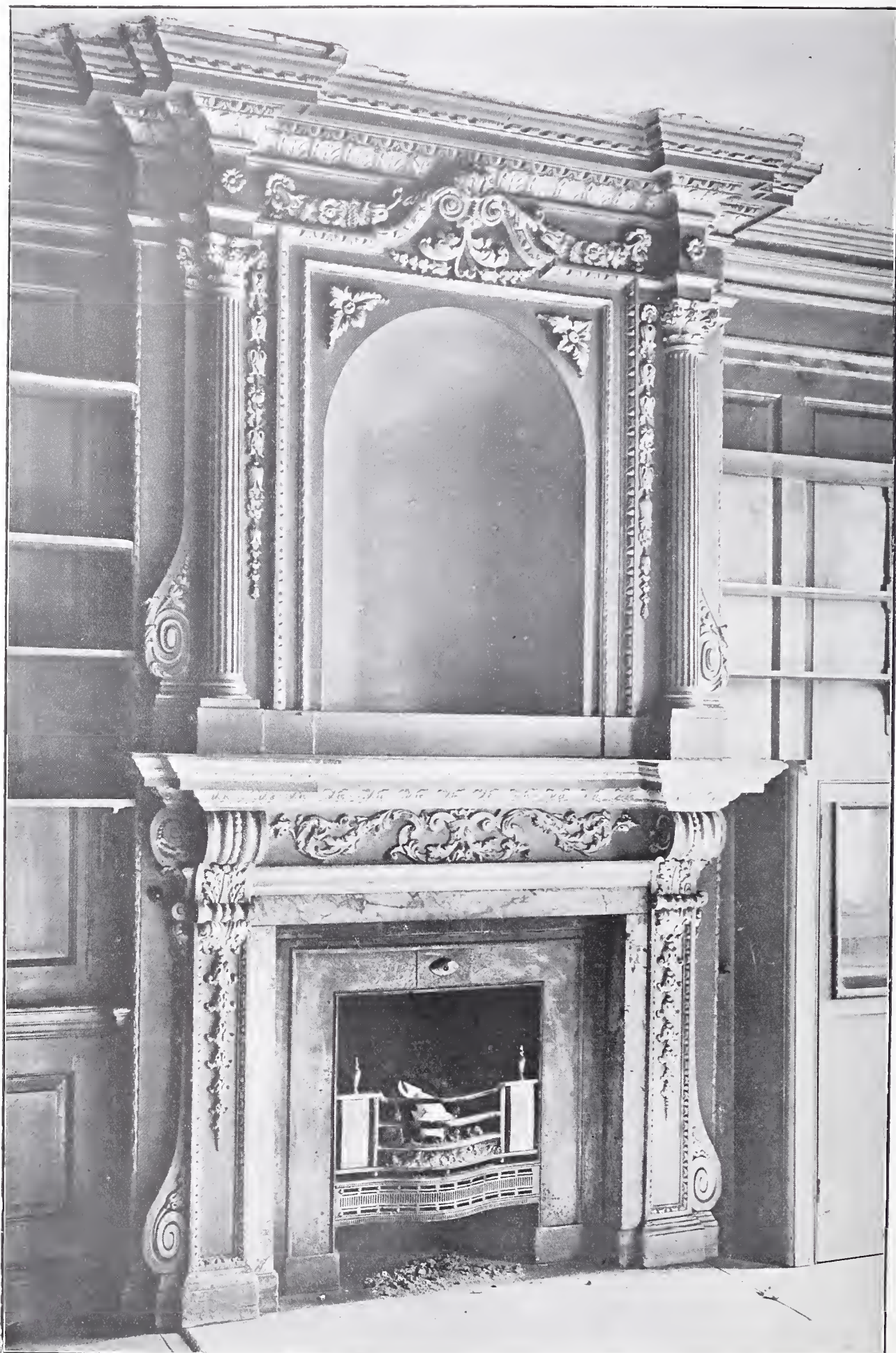




*Feet*

*Door leading to Hall*  
*Scale of Inches*

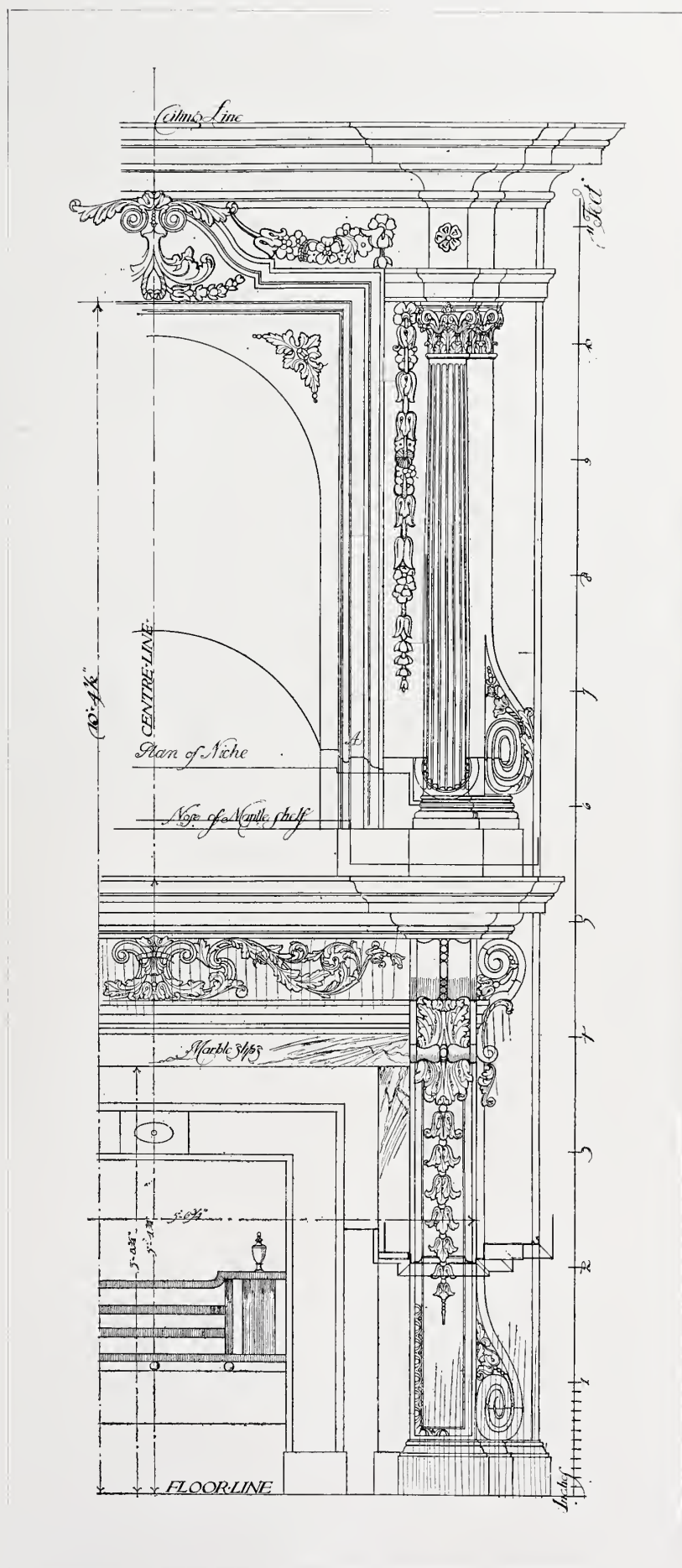




26, HATTON GARDEN. CHIMNEY-PIECE IN THE MUSEUM.

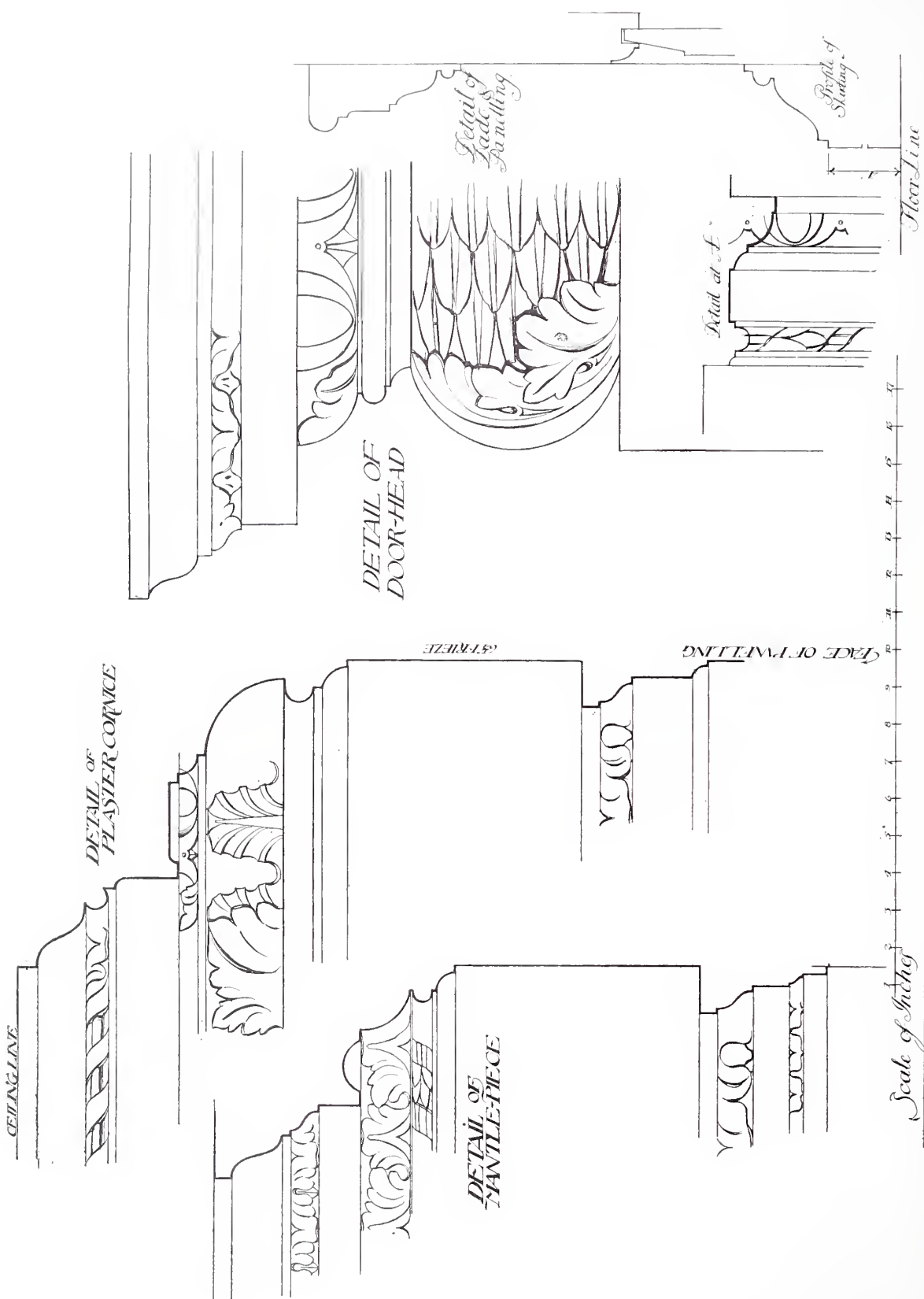
*Board of Education.*





26, HATTON GARDEN, LONDON. CHIMNEY-PIECE IN MUSEUM.  
MEASURED AND DRAWN BY J. M. W. HALLEY.



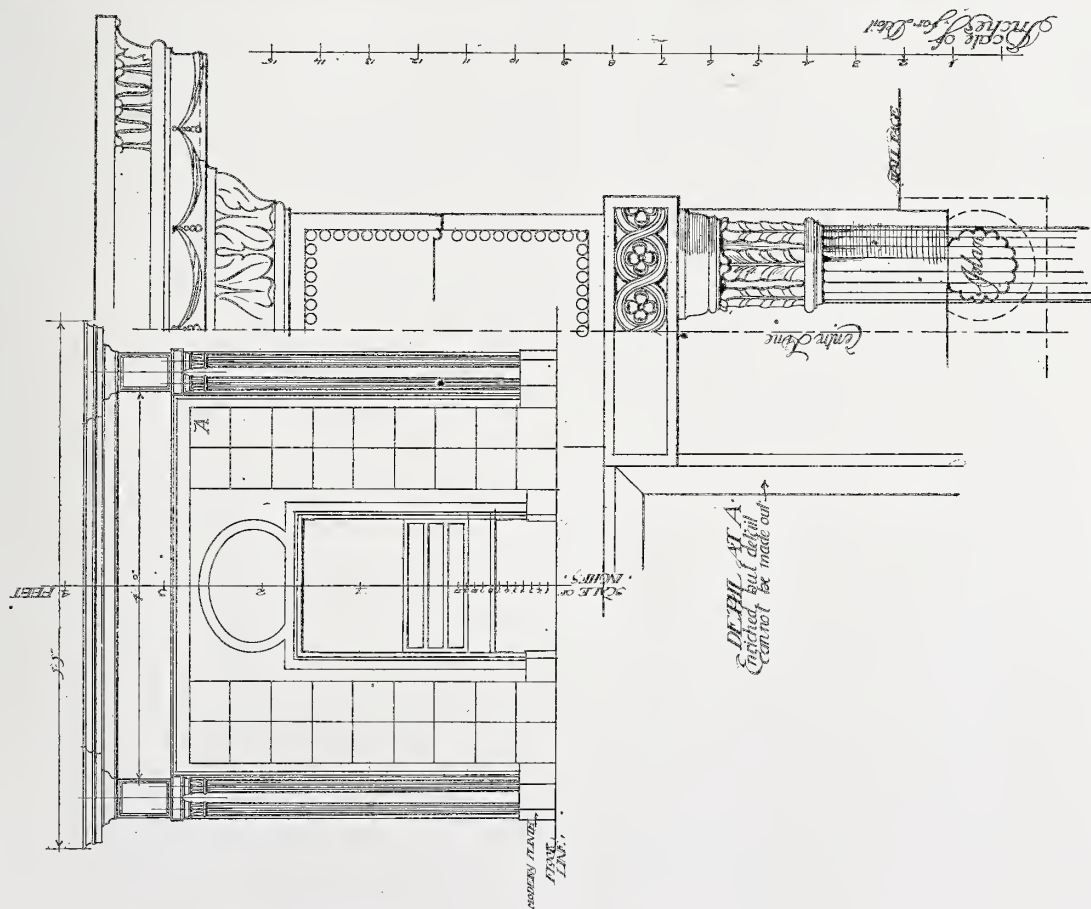


26, HATTON GARDEN, LONDON. DETAILS IN MUSEUM.  
MEASURED AND DRAWN BY J. M. W. HALLEY.





Board of Education.

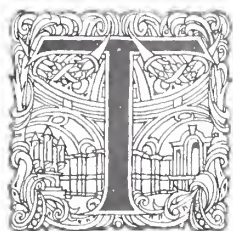


26, HATTON GARDEN, CITY OF LONDON.  
ADAM FIREPLACE IN BEDROOM. MEASURED AND DRAWN BY J. M. W. HALLEY.



# Ingram House, Stockwell, S.W.

Arthur T. Bolton, Architect.



**T**HIS is the first house erected by a company formed for the purpose of providing residential clubs for young men. The building stands at the rear of four large houses in the Stockwell Road, which were purchased by the company, and covers what was previously an orchard. There is an open carriage approach over the site of the stables of one of these front houses, and a large forecourt with a circular drive affords a good open space, laid out in grass plots with some old trees, between the main building and the houses. The manager's house and office occupies one of the frontage houses, the remaining three being let.

The accommodation in the main building is for 208 residents with staff in addition. The bedrooms are disposed in four floors placed above two floors of social rooms and administrative offices, with a mezzanine in one wing for the staff bedrooms. The lowest floor level is 5 ft. below ground, so that the basement enjoys ample light and air.

The principal club floor is raised 10 ft. above ground, and is approached by a short flight of black Belgian marble steps, starting from a vestibule at the ground level and leading up to the principal lounge. From this point the dining-room and library are reached on the left, and the smoking-room and billiard-room on the right. The plan is that of a St. Andrew's Cross, and the large dining-room, which will seat the 208 residents at small tables, occupies the centre and one wing, the other club rooms mentioned above occupying the remaining three arms of the cross.

The club rooms are lofty and well lit by windows on three sides. The ceilings are divided into bays by the main girders, cased in concrete and finished in with plaster mouldings and cornices. The dining-room is further enriched with modelled plaster-work, the central portion having a deep coffered ceiling supported by Ionic columns and pilasters. The central feature is a high-relief

of one of the nine labours of Hercules, which was modelled and cast on the building.

The library is completely lined with bookcases and cupboards with oak facings, the two chimney-pieces forming part of the design. The billiard-room, which takes three full-size tables, has a high dado of white painted deal panelling with chimneypieces of oak, one of which has some carving executed by Mr. Markham from the architect's drawings. In the smoking-room the walls for a height of about 9 ft. are divided out by wood mouldings into panels framing on the main piers a set of blue and white tile panels painted in Holland and illustrating scenes on the canals at the different seasons of the year. The two chimney-breasts are faced with tiles to a similar height. The walls are of a dark green with a light-coloured frieze above.

In all of the above rooms there are panelled window-seats forming part of the scheme, and the radiators where required are placed beneath the same.

All the joinery of the above work, including the various chimneypieces, was carried out by the contractors from the architect's details. The lobbies and passages linking these rooms together are treated with cross-vaulted and intersecting plaster ceilings on wood cradling.

The two staircases to the bedrooms to the right and the left are placed at the junction of the arms with the body of the cross, and are all framed in teak with solid newels, rising four floors in height by four short flights of four steps each with quarter and half space landings, the staircase cages of brick walls and arches forming a hexagon in plan. There is a glazed lantern of similar shape over each staircase. From the nature of the plan all the bedrooms look out into the open, and there are no back or courtyard rooms, the rooms being all of equal value.

There are three grades in size; the standard room is 7 ft. by 10 ft., but the twenty-four centre rooms are 10 ft. by 8 ft. and the forty angle rooms are 10 ft. by 9 ft., these last having two windows to each room. The rooms are all divided by solid





THE LOUNGE.



THE LIBRARY.





Photos: Bedford Lemere & Co.

THE INGRAM CHIMNEYPIECE.



THE ENTRANCE HALL.



concrete slab partitions 3 in. thick, and the doors have Yale latch locks with numbered keys, so that each is a separate tenancy. Each room has a fitted hanging cupboard and a bookcase in addition to the movable furniture. A wall writing-desk with stationery and ink compartments and a hinged flap to a special design of the architect is further provided in the more expensive rooms.

On each floor there are two slipper-bath rooms fitted with combination bath and lavatory, and in addition two shower-bath rooms with needle and douche shower-baths and with two fitted lavatory basins in each. The needs of the residents for the morning bath are considered to have been amply met in this way. All these baths and basins have both cold and hot supplies. This work and the fire mains and hydrant services were executed by Beaven & Sons, Ltd.

There is a service and a linen room on each floor, and a good provision of staff cupboards. There are house telephones connecting these service-rooms with manager and housekeeper.

The lighting is by electricity, and the bedrooms are wired with a heating circuit as well, and have each a plug for Prometheus radiator which can be obtained on hire.

The roof being flat and asphalted at a level of 63 ft. above the ground, a fine promenade is provided, commanding an extensive view over South London as far as the Crystal Palace ridge, while on the north the principal towers and spires of London can be identified. The asphalt work here and in the basement was executed by Thos. Faldo & Co., Ltd.

The basement of the building contains a lecture hall fitted as a gymnasium, having a storage cellar under the vestibule for the chairs and apparatus. This occupies the centre space; on the left the two arms of the cross provide in one a locker-room wing in which are three bath-rooms and a dressing-room for use in connection with the gymnasium, a dark room for photography, and three avenues of 216 lockers for the residents'

hats, coats, and umbrellas, while in the other arm there is a reception-room for guests that can be fitted up as downstairs billiard-room if required.

The club lavatories occupy the space between the arms as a low building with lantern lighting, and are of ample accommodation.

The two remaining arms of the cross on the other side of the lecture hall contain the kitchens and the servants' quarters, with in between another low building for the boiler-house and engine-room, &c.

The building has its own water supply from a well in the chalk, 350 ft. deep, raised by a deep well pump driven by a gas engine, the storage tanks for the water being placed on the roof. There is a hydrant service fitted with Cliffe's patent hose reel valves always ready for use.

Above a plinth of purple Luton bricks about 10 ft. in height the building is faced with stock bricks, with pilasters and a deep frieze and cornice in red bricks. The moulded bricks were supplied by Lawrence & Sons of Bracknell, most of the work being specially made.

The brick carving was executed by Mr. Arrow-smith in Lawrence's red rubbers to the architect's designs.

On either side of the entrance are commemorative foundation and opening stones with the arms of Rochester and London, carved in Hopton Wood and supplied from Farmer and Brindley's studio.

The wrought-iron staircase railing, and the two copper lanterns on either side of the main entrance, were executed from the architect's designs by the Birmingham Guild of Handicraft.

On either side of the main arch above are two large ovals in salt glazed ware, deep blue and light green in colour. These represent Youth and Age, and, together with the Four Seasons burnt in terra-cotta and used in the internal decoration of the club rooms, were all modelled in low relief by Mr. Broad of Doulton & Co., and were successfully fired at their Lambeth potteries.

## INGRAM HOUSE, STOCKWELL, S.W.

ARTHUR T. BOLTON, Architect.

WIDNELL & TROLLOPE, Quantity Surveyors.

READE, REILLY & JACKSON, Consulting Engineers.

THE LATE D. DAVIES; JOSEPH WEAVER, Clerks of the Works.

RUDD & SON, General Contractors.

### SOME OF THE SUB-CONTRACTORS.

DORMAN, LONG & Co.—Steel Work.

BEAVEN & SONS, LTD.—Internal Plumbing and Fire Service.

FLETCHER, RUSSELL & Co.—Gas Cooking Apparatus.

TURPIN PARQUET FLOOR Co.—Oak Block Floors.

THOMAS FALDO & Co., LTD.—Asphalt Roofing and Paving.

STUART'S GRANOLITHIC STONE Co.—Cart Road.

CONSTABLE, HART & Co., LTD.—Tar Paved Roads.

HALL'S DISTEMPER (SISSON BROS. & Co.), CHARLTON WHITE ENAMEL (J. B. ORR & Co., LTD.).—Decorations.

BIRMINGHAM GUILD OF HANDICRAFT.—Wrought-iron Balustrading and Copper Lanterns.

LOCKERBIE & WILKINSON.—Locks, Rain-water Heads, &c.

ARTHUR ADAMS.—Hinges, Fanlight Openers, &c.

C. ISLER & Co.—Well Sinking.





THE DINING-ROOM.



THE BILLIARD-ROOM.

*Photos: Bedford Lemere & Co*



# Hollington House, Newbury.

Arthur C. Blomfield, Architect.



**T**HIS house stands on the site of an old one, which being of no architectural or antiquarian value, was pulled down. The garden on the south-west, the terrace foundation on the south-east, and the position and direction of the existing drive, were features which had to be accepted as unalterable, and the plan and general arrangement of the house was adapted to these requirements. The terrace front faces south-west, and commands an extensive view over the neighbouring country in the Highclere direction.



STAINED-GLASS WINDOW IN THE HALL:  
"ST. GEORGE AND THE DRAGON."

The soil is sand and gravel, and an excellent and dry foundation was obtained. The controlling features above alluded to dictated the position of the principal entrance, and in order to render it easy of access from all parts of the house, an internal court was arranged with a corridor on one side giving direct communication between the pantry, servants' offices, and the front door, and affording easy and convenient access for outdoor servants to the owner's room without going through either the private part of the house or



FLECTROLIER.

the servants' quarters. The ground slopes down from the north-west to south-east, and advantage is taken of this to provide cellars under the



ELECTRIC WALL BRACKET.



*Photo: Arch. Review Photo. Bureau.*

ENTRANCE COURT AND PRINCIPAL ENTRANCE.





A CORNER OF THE ENTRANCE COURT.

Photo: Arch. Reutew Photo. Bureau.





THE WEST FRONT.

*Photo: Arch. Review Photo. Bureau.*

servants' offices, while a crawling way for pipes and wires is arranged under the rest of the house, which is lighted throughout by electric light and warmed by low-pressure water in coils.

The walls are built of brick, with a facing of Guiting stone, relief being given by angle piers of red brick. The external woodwork is entirely of oak, and the roof is covered with local red tiles, dipped in a brown colouring liquid before burning. The oak work in the interior was all carried out entirely in the shops of Wheeler Bros. of Reading, the general contractors, from the architect's drawings, with the exception of the carved work, both wood and stone, which was by H. H. Martyn & Co., Ltd., of Cheltenham. The ground floors are all of oak, and the hall, billiard-room, stairs, main corridor and dining-room, are all panelled in fumed oak. The upper floors are finished in deal, painted white.

The complete scheme of lighting and electric

power for pumping was carried out by Tamplin & Makovski, Ltd., of Reigate and London. The stained-glass work was executed by Campbell & Christmas. The oval window of "St. George and the Dragon" in the hall was specially designed to suit the setting out of the bars as shown. In the other leaded glass windows in the hall the upper panels contain heads of figures representing Morning, Noon, and Night, and Morning and Evening Stars. In the inner hall the leaded glass windows contain heads representing the Four Seasons in the upper panels. The lines of these windows are clearly shown in illustration of elevation. Other windows were executed in vestibule and flower room in designs appropriate to the rooms. The wrought-iron entrance gates were executed from the architect's design by J. W. Singer & Sons, Ltd., of Frome. The electrical fittings were specially designed and executed by F. & C. Osler, Ltd.

## HOLLINGTON HOUSE, NEWBURY.

ARTHUR C. BLOMFIELD, Architect.

WHEELER BROS., General Contractors.

### SOME OF THE SUB-CONTRACTORS.

H. H. MARTYN & Co., LTD.—Wood Carving.  
 R. E. PEARSE & Co., LTD.—Gunmetal Casements  
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MORNING-ROOM.





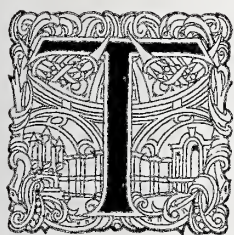
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THE DINING-ROOM.

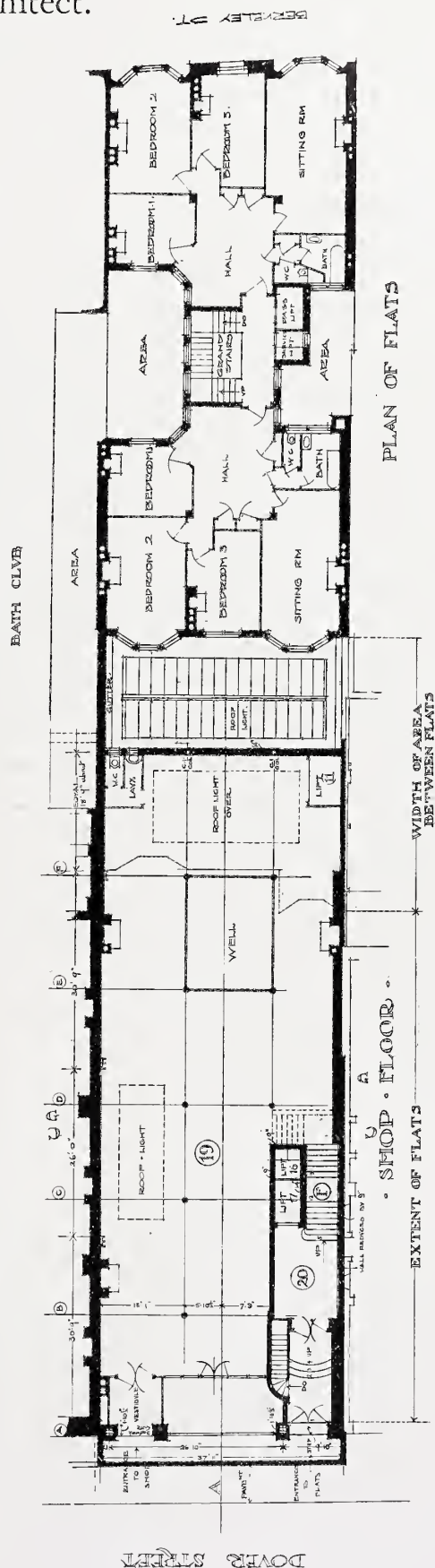


# The Well Fire Company's Premises, London.

J. S. Gibson, Architect.



THESE premises, situated in Dover Street, Piccadilly, consist of showrooms and offices on the ground floor, with flats above having separate entrances from Dover Street and Berkeley Street in the rear, the building extending between these two streets. The principal façade in Dover Street is in Portland stone. The showrooms on the ground floor are elaborately fitted, the internal woodwork being carried out by J. W. Sparrow. The reception-room has been carried out to designs in Georgian style, the walls being treated with broken cornered panels with ornamental pediment and husks dropping at sides, the dado rail and skirting enriched with Georgian detail, a particularly fine modillion cornice being a feature. The chimneypiece and overmantel are treated in bold Georgian style with finely modelled fruit and flower festoons and drops. The overdoors and architraves are enriched with baskets of flowers and fruit, &c. The doors are of mahogany. This work has been executed by W. L. Radley & Co., Limited. The steelwork was executed by Homan and Rodgers; the casements were supplied by Henry Hope and Sons, who also carried out the heating and ventilating; the gates, railings, and handrails were made by Omar R. Albrow, of 69, St. John's Hill, Clapham Junction; the stained glass and leaded lights by William Smith; and the lifts and cranes by Archibald Smith and Stevens, Limited. Cash & Co. carried out the electric wiring and bells, and Gilbert Seale the modelled plaster-work. Phillips & Co. supplied the wall-papers. The Well Fire Company supplied the stoves, grates, &c., sanitary ware, electric light fixtures, and the door furniture. Mr. James Carmichael, of Wandsworth, was the general contractor.





*Photo: Bedford Lemere & Co.*





*Photo : Bedford Lemere & Co*

THE RECEPTION ROOM.

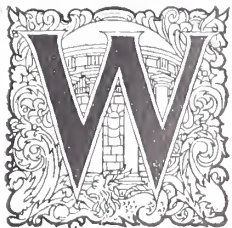
The reception-room has been carried out to designs in Georgian style, the walls being treated with broken cornered panels with ornamental pediment and husks dropping at sides, the dado rail and skirting enriched with Georgian detail, a particularly fine modillion cornice being a feature. The chimneypiece and overmantel are treated in bold Georgian style with finely modelled fruit and flower festoons and drops. The overdoors and architraves are enriched with baskets of flowers and fruit, &c. The doors are of mahogany.



# Books.

## THE "MADONNA DI VICO."

*The Santuario of the Madonna di Vico, Pantheon of Charles Emmanuel I. of Savoy. By L. Melano Rossi. 21s. net. London: Macmillan & Co., Ltd., St. Martin's Street, Leicester Square.*



WE have read Mr. Melano Rossi's "Madonna di Vico" with somewhat mixed feelings, of which a few are: pleasure at becoming better acquainted with a great domed building, astonishment at Mr. Rossi's wide reading, irritation at the uses he makes of it, and some amusement at his wild prejudices and enthusiasms.

Mr. Rossi should really have written two books, one a history and criticism of the Santuario, the other a volume of essays on art, architecture, religion, history, and the many other things which vex Mr. Rossi's spirit. We cannot avoid the feeling that the Santuario is a peg on which is hung a vast amount that has nothing whatever to do with it.

Mr. Rossi hates archæology with a fervour quite comic and quite inconsistent. Hark at him. "Archæological disquisitions are of no practical value to art, and they are always misleading through the constant endeavour to distort historical truth. It is a barren study, the only really tangible result of which is cause for antagonism of races." We had no idea that antiquaries were such terrible fellows. We have visions of the Chancelleries of Europe letting loose the dogs of war because of the race antagonisms stirred up by some naughty archæological society. Also Mr. Rossi is very angry about Gothic architecture. We are sympathetic even when, in his devotion to Renaissance work, his language grows fervid to the point of slopping over; but such phrases as "so complex and preposterous was the real legitimate method of good Gothic building, etc.," do not impress us with a sense of Mr. Rossi's judgment. It is generally a weak argumentative structure which needs to be buttressed by abuse.

To turn to the ostensible subject matter of the book. In 1596 Charles Emanuel, Duke of Savoy, set about to build a Pantheon for his house and incidentally to create a fitting home for the miracle-working Pilone della Madonna di Vico. Vitozzi, a military engineer, was appointed architect and designed a church elliptical on plan, to be surmounted by an elliptical dome flanked by four campanili. Under the lantern which tops the dome stands the shrine. Vitozzi's church was never completed. Not until 1692 was the next important step taken, when Francesco Gallo, a

youth of twenty, was invited to prepare plans for the dome, Vitozzi's model having been destroyed. From 1729 to 1731 the drum and dome were building. Mr. Rossi would have us believe that the result is "the fourth largest and the most beautiful dome in the world."

He takes the dimensions of the major axis, 119 ft., as the determining measurement in his comparisons, and ignores the 80 ft. of the minor axis. Surely, however, the eminence of this dome considered as an engineering achievement is determined by the minor axis, and we are convinced that Mr. Rossi will have few supporters in his dictum that it is "the fourth largest."

As to its being "the most beautiful dome in the world," and Mr. Rossi's view that "there remains the dome of St. Sophia as the only possible rival to Gallo's at Vico," opinions will probably differ. The French and English domes are rejected because their exteriors are of "carpentry work having no constructive merit." It is a new view that the dome of Wren's St. Paul's has "no constructive merit." The domes of Brunelleschi and Michael Angelo are also ruled out because the dome is not the principal feature of the plan, surely a somewhat arbitrary distinction when considering a dome *per se*.

As to the supreme beauty claimed for the dome of the Santuario, an oval dome which is to practically the same curve inside and outside can hardly be successful on both faces. If the pitch is low, as at Vico, the inside view is admirable, but the outside necessarily looks like a dish-cover. Even on the inside from some points the curves of an oval dome are markedly ugly, as may roughly be seen by holding up a bowler hat and looking at the underside. Mr. Rossi feels a pardonable pride in having discovered this great dome, and to write a monograph on it is a pious and useful act. It is extraordinary that it has so long escaped notice, and all credit should be given to the discovery, but it is easily possible to exaggerate the importance of it. This Mr. Rossi does to an irritating extent. He uses language about it which would be intemperate if applied to the Parthenon.

Our author suggests that the purpose of Charles Emanuel in glorifying the Madonna di Vico was to set up a symbol of the United Italy which was to come, which we see to-day flourishing under the rule of the House of Savoy. "The worship of the Madonna was to lead to the worship of the Italy which did not exist, but which was to be created. . . . This also explains the preference given to a grand Renaissance style, instead of the solemn and dreamy mediæval Gothic." The first statement merely attributes an unlikely subtlety in



prophetic outlook to Charles Emanuel, but the second seems pure nonsense. We are quite clear that Vitozzi never gave any conscious "preference to a grand Renaissance style" because he had in mind the national aims of Italy, or rejected "mediæval Gothic" for the same or any other reason. He designed as he did because he lived when he did. The idea of "dreamy mediævalism" being a possible motive in the mind of a military engineer in 1596 is frankly absurd. Vitozzi's plan is a normal if striking development of earlier elliptical plans. It is even open to doubt whether it was the best sent in for the competition which took place. The piers are so massive as to destroy a sense of scale, and Count Negri's alternative plan is in some points superior. Gallo's dome has a varied ancestry. Scores of domes resulted from the popularity of the domical idea caused by St. Peter's at Rome. Mr. Rossi sets out with painful exactitude a list of some 170 books he has consulted. We are amazed to note the absence from this list of the monumental works of Laspeyres, of Strack, of Hittorf and Zanth, and not least of Geymuller's "*Projets Primitifs de St. Pierre.*" From them there is information about domes to be gathered which would add to Mr. Rossi's grasp of his subject.

The worship which Mr. Rossi accords to Roman architecture and to the Roman spirit in everything spreads itself in flatulent phrases throughout the book. Rome and Rome alone will do. "After the disappearance of Rome, the arch degenerated into the grand but warped shapes known under the names of Byzantine and Romanesque, Saracenic and Slavonic, Saxon and Norman, Lombard and Gothic, Renaissance and Rococo." One is tempted to wonder in what respect the "shapes" of, say, Norman and Renaissance arches are "warped."

While Renan is quoted in contempt of Gothic work, Mr. Rossi conveniently forgets that Renan said of Rome that she originated nothing, but only organised the ideas of others.

The book throughout is congealed with long quotations. Scores are incorporated in the text, scores more languish in foot-notes, till the eye is weary with the pursuit of references and the brain throbs in the effort to disentangle Mr. Rossi from his one hundred and seventy odd authorities. They are an angry crew, these authorities, and if one may lapse into Mr. Rossi's habit of quotation it will be to recall Thomas Love Peacock's Mr. Toobad—"the devil is come among you, *having great wrath.*"

## A Sketch of Irish Ecclesiastical Architecture.—(*Conclusion.*)

### VIII.—AN ECLECTIC NATIONAL STYLE.

#### PART II.



S regards the plan of the churches, we have already noticed in the fourteenth century—for instance, in the Black Abbey at Kilkenny—the tendency to extend these on one side (by transept, or aisle, or both), the strictly cruciform shape being given up; this arrangement was further developed. The side chosen is nearly always the south<sup>109</sup> (the domestic buildings of the abbeys being on the north); sometimes the south transept and south aisle together form something like a rectangle, as at Ross Abbey; the same figure was formed in Limerick Cathedral by three extra transepts set side by side. It is by no means essential that the transept should open into the side arch of the central tower, which has its own abutments, as already described; it is more conveniently placed a little further to the west; the abbeys of Quin and Ross and Ennis supply examples of this arrangement. The narrow dimensions of the high towers, which are so common, by reducing the width of the chancel arch tend to pinch

off the choir from the rest of the building; at Ross Abbey this separation is completed by a wall, having in front of it the rood-loft—a solid gallery across the tower; at Ennis there was until recently a stone screen in a similar position, reaching to the top of the arch like a huge cusplless Perpendicular window; the ornamentation in the arch under the side of the tower, which was probably associated with this, is of uncusped flowing tracery—some would call it "flamboyant." In other churches there was a wooden screen. Sometimes, as at Quin and Ross Abbeys, the two altars at the east end of the nave remain, as in other parts of the churches. I do not remember any Irish church built at this time that possesses a clerestory; buttresses are constantly omitted; and the general effect, both outside and inside, is very unlike that of an English fifteenth-century church.

The round arch reappears, often side by side with the pointed form. At Ross Abbey nearly all the arches (except those in the cloisters) are round. At Callan, in the nave of the very interesting parish church, square-headed Perpendicular windows have round-headed recesses inside, and the head of the north doorway is also round. Smaller round arches, such as those over tombs

<sup>109</sup> The Abbey of Kells (Co. Kilkenny) has a north transept only, of considerable size.



in the abbey at Dungarvan and in the smaller church at Newtown Trim (where the mouldings mark them as of late date), are not uncommon. It is of course a very natural form to use, though it may well have been suggested by Irish Romanesque buildings, just as we have seen the billet ornament copied in later work. But the quite plain arches, as at Ardfert Abbey (and, in all probability, at Holycross), resemble still earlier work, and it is possible that they may have been suggested, or justified, by it. Even a rough arch of uncut stone continues to be used in the smaller churches; sometimes it is much flattened, as in the late aisle added to the church of Killiney,<sup>110</sup> and on the inside of a doorway at Dulane, which may be of somewhat earlier date; sometimes it is quite flat, as in the little church above the abbey at Mellifont (probably the parish church of the tenants), between the late door and window at the west end. This shows strong faith in the mortar, which, as in the case of the vaulting, has been largely justified. In general flattened arches are common, but the four-centred arch is exceptional; it occurs in the cloisters at Ardfert Abbey.

As regards the ornamentation of the arches, it is unusual, except in the small ones belonging to doorways, tombs, sedilia, and piscinas, for this to extend beyond chamfering. But there is sometimes a chamfered rib attached to them beneath, resting at each end on a pointed bracket cut into faces, the usual support of ribs at this period—in groining and otherwise. In the Parish Church at Callan, on the south side of the nave these corbels are attached to capitals which are octagonal below, to fit the pillars, but at the top have become square with chamfered corners, corresponding to the outline of the arches (excluding the rib) with the piece of wall between them. The north side has similar ribs and corbels and arches, but the pillars are much plainer; they are square, chamfered at the corners, and swell out at the top, to fit the wall which they carry, in what can hardly be called a capital. At Ross and Moyne Abbeys octagonal pillars, with plain capitals but without corbels, roughly fit the ribbed arches which they support. In the north aisle of the abbey at Roscommon the round pillars have low capitals of strange shape bearing some resemblance to those in the choir of Iona Cathedral.

The cloisters are commonly of the Cistercian or Italian type, adapted for carrying a story above, which they usually do. From a constructional point of view, the wall towards the garth is supported on deep piers carrying low arches, though these piers are, on their inner and outer faces, cut more or less into the shape of pillars; there is great variety in the treatment of these, in various abbeys, in different sides of the same cloister, and even in the different pillars of the same side. The cloisters at Sligo are perhaps the best

example of this irresponsible variety—and of its success. Less frequently larger portions of the wall are left, undisguised, the window-like openings between them, under flattish arches, being occupied by an arcade set back from the court, as at Bective and Ardfert Abbey.

Cloisters are roofed with the plain rough barrel-vaulting which has such a long history in Ireland, and this is often used also over the lower story of the domestic buildings. It is sometimes round, sometimes pointed; we have seen it groined at Quin Abbey, and the kitchen at Bective (which may probably be of late date) has a rough groined roof starting from a central octagonal pillar. Of more elaborate groining, with ribs, there are many examples under a central tower, the rest of the church having nearly always had a wooden roof; the ribs are (at least in the great majority of instances) merely chamfered, and of course constantly start from pointed corbels.

Besides the lancets, the windows fall into two classes, according as their tracery owes its origin to the fourteenth-century or to English Perpendicular architecture. In the former class we have noticed that the window with intersecting mullions struck the Irish fancy; it was used both unaltered and in derived forms. But besides this there are windows of flowing tracery, some of which may belong to the fourteenth century, while others are certainly later. This sometimes assumes a flame-like appearance, and such windows are described as “flamboyant.” But it should be noticed that there are English windows of apparently “flamboyant” design belonging to the fourteenth century, and that the Irish windows so



SOUTH-WEST DOORWAY OF CATHEDRAL,  
CLONMACNOISE.

<sup>110</sup> See Article III., p. 121. Occasionally, as in the doorways of the smaller churches, the problem is more simply solved by using a lintel (as in the oldest Irish building), an arch being sometimes added on the outside for ornament—the north-west doorway opening into the aisle at Killiney is of this kind; at Kilbeheny, near Mitchelstown, there is a straight lintel undisguised. It is very difficult to assign an exact date to these.





QUIN ABBEY: THE KITCHEN.

called do not show a marked resemblance to ordinary French examples, so that their design is probably only a form of flowing tracery. The absence of cusping, as is the rule in late Irish windows, probably helps to emphasise the flame-like forms sometimes assumed. At all events, to speak of the style as "Irish Flamboyant" is, if possible, less reasonable than it would be to call it "Irish Perpendicular." For English Perpendicular architecture certainly had a considerable influence on Irish fifteenth-century building, in windows, carving, and mouldings. One English type of window—square-headed, under a label—usually of two, sometimes of one, and occasionally (as in the parish church at Trim) of three lights, is used unaltered, though sometimes, as in Callan Parish Church, the cusps are omitted; there is often pretty carving in the spandrels, for instance, at Clonfert Cathedral, and in the smaller church at Rahan, where Romanesque windows were altered to this fifteenth-century form outside. In the larger windows this English style was not copied to the same extent. There are, indeed, windows in Ireland (such as the west window at Holycross and the east window in the north aisle of Callan Parish Church) where the tracery bears a more or less close resemblance to English Perpendicular—in the former instance cusps are omitted. Or sometimes the architect worked on the Perpendicular idea (just as he worked on the Decorated types), producing windows which would not be found elsewhere than in Ireland, like that in one of the transepts on the south of Limerick Cathedral. Sometimes, in what must be the latest windows, belonging probably for the most part to the sixteenth century (or perhaps in some cases to even later "restorations")<sup>111</sup> the tracery, in round-

headed openings, goes back to an extremely simple form, the lower lights having either round or flattened arches—there are examples of this at Ross Abbey—and at Kells (Co. Kilkenny) it is curious to find the simplest plate tracery reappearing under these conditions.

Besides the high, slender towers already described, there are others of a different and less local character, though these too are, in general, distinctly

Henry VIII. Outside the Pale the monks and friars often managed to keep or regain a hold of them (as they did at Holycross), sometimes for a considerable time. Muckross Abbey was, as we have seen, repaired in 1626. In 1642, during the Civil Wars, the Dominican Order—43 houses—was, we are told, "completely restored in Ireland." There is an inscription in the cathedral at Clonmacnoise stating that this was "restored" in 1647, and the innermost order of the chancel

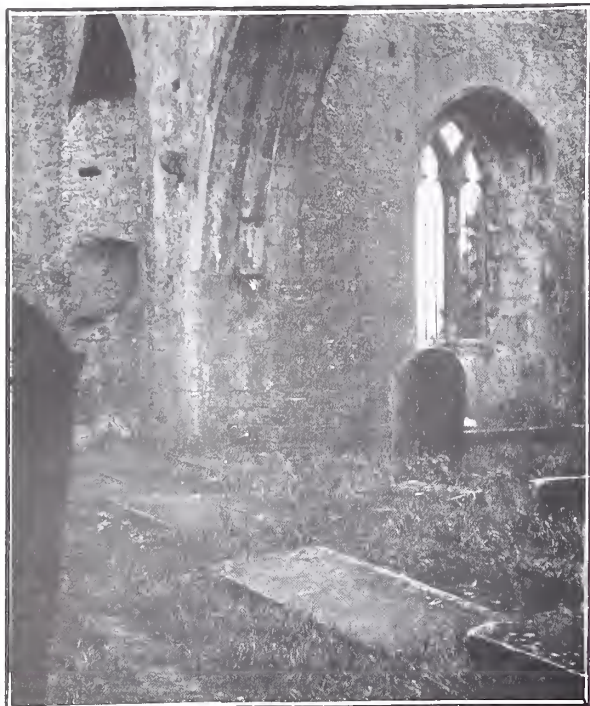
arch in *Teampall Finghin* close by is no doubt of the same date; perhaps also the Renaissance west doorway of Moyne Abbey. In some cases the friaries were not finally given up till some time in the eighteenth century, as at Quin and Ross and Clare—Galway and Sligo. As a rule, in those troublous times, this occupation would involve only the renewal of the wooden roofs and other indispensable repairs, which accounts for many of these buildings being in an excellent state of preservation. But the fact should be borne in mind.



PILLAR OF NAVE ARCADE, ROSCOMMON ABBEY.

<sup>111</sup> It is necessary for Englishmen to remember that in Ireland the monasteries were not all finally deserted in the reign of





QUIN ABBEY: ENTRANCE TO TRANSEPT FROM NAVE.

marked as Irish by the elaborate battlements which crown them. These Irish battlements have been already referred to; they are crow-stepped, and chamfered back towards the top, like the edge of a chisel, and were usually added at (or about) this period to older churches, such as Jerpoint Abbey and the Cathedrals of Cashel and Ardfer. They are no doubt often intended for use as well as ornament, being found on castles (as well as on fortified churches); for instance, at Dalkey and Bullock's Castle, near Dublin, and at Dromineer, on Lough Derg, also upon St. Lawrence's Gate, Drogheda. Whether the crow-stepped gable on the dignified south front of the transept at Ennis Abbey is an extension of these or suggested from Scotland or the Low Countries would perhaps be hard to determine. On the towers such battlements are so used and varied as to produce an excellent and distinctly Irish effect; there is a simple example at Quin, more elaborate ones at Jerpoint and on the Parish Church at Fethard (Co. Tipperary), as well as at Dungarvan.

Mouldings, as has been said already, are chiefly confined to the smaller arches, though an aisle arcade towards the east end of St. Audoen's, Dublin, is fully moulded. They are usually shallow, and sometimes on a very small scale; occasionally they are rectangular, as, for instance, some of those in the west doorway at Quin, and all those over windows of the south aisle in Callan Parish Church. They are frequently grouped, as in the south-west doorway of Cashel Cathedral, and in the admirable north-west entrance to the Cathedral at Clonmacnoise (where they seem to be on a square plan, as if they had been cut out of square "orders"); but in some cases, such as those at Quin and Callan just mentioned, there is little or no art in their arrangement—they scarcely do more than break the surface of the jamb, label, or arch. As a rule they

show more or less distinctly the character of the period, but (besides those in the cloister court at Holycross, which may be regarded as transitional) the mouldings on the south-west doorway of Callan Parish Church have the appearance of belonging to the fourteenth century, though they are combined with unmistakably late ornament, and form part of a late building.

An Irish church of this period continues to be a plain and economical structure, and other kinds of carving are, like the mouldings, confined to a very small part of the churches and to tombs. This at all events gives an impression of "reticence," and avoids that tendency of some late work in England to crowd every available part with ornament, often of rather inferior artistic quality. What Irish carving there is, if sometimes rather stiff and shallow, is frequently very good. Besides the fine specimens at Holycross, and the sedilia of Callan Abbey, there are some good examples built up in the north transept of Cashel Cathedral. There is one distinctively Irish form of decoration which should be mentioned—the treatment of a dripstone or label. This seems in some cases to be regarded as a canopy of stuff,<sup>112</sup> its ends tailing off into a knotted ribbon, which again develops into foliage, usually one or more vine-leaves, as on a tomb upon the outside of the chancel at Tuam and in a window of the smaller church at Newtown Trim. There are also excellent examples on the south-west doorway and neighbouring window of Callan Parish Church; in the former of these (on one side) an animal is eating the vine, and since his tail also is interwoven with the foliage, he is very completely connected with the general ornamentation—almost as much as a monster in the Book of Kells. Pointed brackets frequently end off into a bit

<sup>112</sup> The "linen-pattern" in panelling is perhaps analogous.



ROSS ABBEY: THE CLOISTERS.





CALLAN ABBEY: CHURCH FROM SOUTH-WEST.

of foliage. The Irish artist sometimes inserts a bit of carving casually, like the owl at Holycross above mentioned. In Clonfert Cathedral, at the entrance to the chancel, are panels in the piers; some of these contain representations of mermaids and sea-monsters, in allusion to the travels of St. Brendan the founder, while from the chancel arch (towards the east) stands out the head of a bishop, and from the arch and jamb single vine-leaves, of similar workmanship to the excellent corbels, supported by figures, and to other carving at the spring of the arch.

There is some excellent carving of figures as well as of quaint animals in the cloisters at Jerpoint. But in general the figures (as in the early Irish MSS. and upon the High Crosses) are very inferior to the merely decorative work. There are belonging to this period a good many examples—frequently representations of the Apostles—on tombs, in Kilkenny Cathedral, for instance, and at Cashel and Jerpoint: the figures, which often seem to follow a certain marked type, are apt to be squat (as in fifteenth-century English sculpture), and the expression of the faces to be undignified. An image of St. Francis above an altar at the east end of the nave at Ennis shows these defects in an exaggerated form. And there is one rough type of the “Rood with Mary and John,” of which specimens occur in Cashel Cathedral, which (though they are, of course, excellently meant) one does not care to reproduce; these may be of the sixteenth century, in some cases perhaps of even later date.

The pedestals or brackets for figures are, like the corbels which hold up vaulting-ribs, often of a pointed form. There is a graceful example in the ruined south aisle of the Parish Church at Fethard, which curves outwards from its point, like fan-vaulting. At St. Patrick’s, Dublin, there is a large bracket of similar shape, decorated with raised ribs, upon which has now been placed a well-carved figure, probably of St. Patrick, believed to be of the fourteenth century. The pointed corbel, in its various forms, is a characteristic feature of late Irish Gothic—the most extraordinary use of it is in an old part of the church

at Carrick-on-Suir (strictly speaking, at Carrick Beg, on the right bank of the river) where two such brackets, outside and inside the building, hold up a small tower built upon the north wall of the church.

From the characteristics of Irish architecture belonging to the fifteenth and earlier part of the sixteenth century (which I have tried to sketch) it appears that, while no definitely new style, like the Perpendicular in England, was then developed in Ireland, yet that early in the fifteenth century the architects and workmen there began to look more widely for examples, not merely following (more or

less freely), as before, the style prevailing in England, but adopting what suited their taste, whether in English fifteenth-century tracery and carving, or in the work of earlier times. There are also, perhaps, traces of their owing some small debt to the Continent at this period, but this is uncertain, and in any case the influence was slight. At the same time they used with such freedom what they borrowed, altering and adding so much on their own account, that, though the style must be called eclectic, the buildings are unmistakably Irish.

There has recently been much church-building in Ireland; besides the “restoration”—with various degrees of reverence for antiquity—of the ancient cathedrals, as well as of some abbeys, many new Roman Catholic churches have been erected, often at great expense. But it strikes one with surprise that, in a country where such efforts have of late been made to revive what is national, there has been (at least) very little attempt to reproduce distinctively Irish architecture; even the un-Irish apse has now found a home in Ireland. The Irish form of Romanesque might perhaps be an unnecessarily expensive style to use effectively, but late Irish Gothic could, one would think, in skilful hands, be used so as to produce fine buildings characteristic of the country.

As to the arts which are made subservient to architecture, it is not of course to be supposed that these were not so used in Ireland; but the ruin and the restoration of the buildings (there is scarcely a church in Ireland, Roman Catholic or Protestant, which has not suffered severely from one or both) has left but scanty traces of them remaining. The fifteenth-century stalls, though not the old canopies, survive in Limerick Cathedral; at St. Mary’s, Youghal, besides the old oak roof of the nave, there is a relic of the carved woodwork—perhaps from the rood screen—to which an impossibly early date is locally assigned. One or two examples of stained glass formerly existing have been noted in the previous article; with this no doubt the windows always were, or were intended to be, filled. There are many good tiles, some of them forming an excellent continuous pattern, preserved at Mellifont, and the tiled





IMAGE, PROBABLY OF ST. PATRICK, IN HIS CATHEDRAL, DUBLIN, AND POINTED BRACKET.

floor of Christchurch, Dublin, to judge from the specimens remaining and the reproductions from them, was of a splendid kind. The elaborate frescoes at Abbey Knockmoy, near Tuam, are in part still quite visible. There are traces of painting in Cashel Cathedral; also in Cormac's Chapel, particularly of a pattern (like what might be found on tiles) under the arcade on the south side of the chancel. In Kilkenny Cathedral some remains of frescoes were finally destroyed when the ugly irregular stonework in its walls was exposed—as if a skeleton were the perfect type of human beauty; this form of “restoration” is especially inexcusable in Ireland, where a multitude of old buildings, long dismantled, still show unmistakably to the most casual observer that plaster is not modern white-wash, and that rough masonry was in the Middle Ages covered over on the inside—and often on the outside as well. The chancel of Hore Abbey shows the remains of elaborate plaster patterns; there is a plant at Cashel, and at Quin Abbey traces of a Crucifixion in this material; these were, no doubt, once painted.

One cannot help wishing that more of the old ruined churches could be placed under the care of the Board of Works, which has done much to preserve those committed to it, and only occasionally

errs from excess of zeal, so as to risk falsifying the history of the buildings; some are protected by religious communities, or by private owners. But, of those still uncared for, many are in a very forlorn condition, being treated like parts of a terribly ill-kept churchyard; in other cases, where they are not used for burials, I have seen these consecrated Christian churches put to the use once thought appropriate for the House of Baal at Samaria. One cannot help believing that a little instruction on such points from those who have influence might do something to correct such irreverence, and would find support not only among the more educated classes. However, personally, I cannot end these articles without gratefully acknowledging the courtesy and kindness which I have met with, in my attempts to study and photograph these ancient buildings, from the Irish Clergy, both Protestant and Roman Catholic, as well as from the laity of all classes almost everywhere—the exceptions could be counted on the fingers of one maimed hand—and I shall be glad if, in return, I can in some very small measure help to secure a more just estimate of the interest and excellences to be found in Irish architecture. Help on particular points kindly given me by Mr. C. H. Read, F.S.A., Dr. Warner of the British Museum, Mr. Guy F. Laking, F.S.A., and Dr. Wickham Legg, F.S.A., has been already acknowledged in footnotes; and I have to thank my brother, Mr. Basil Champneys, for many valuable suggestions and criticisms, particularly in the later articles.

ARTHUR C. CHAMPNEYS.

[The illustrations are from photographs taken by the author, developed and printed by Messrs. Seaman, Ilkeston.]



LATE WINDOW IN NORTH TRANSEPT OF KELLS PRIORY, COUNTY KILKENNY.



THE ARCHITECTURAL  
REVIEW, DECEMBER,  
1907, VOLUME XXII  
NO. 133.



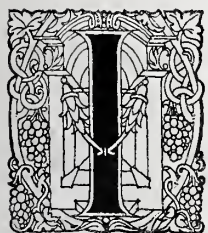


SPANISH IRONWORK: GILT REPOUSSE GATE ORNAMENTS.



# Notes of the Month.

*An Exhibition of Spanish Ironwork—Frontages and Red Flannel—Amateurishness in Art—Overheard at the Lord Mayor's Show—Genius and other Trifles.*



It is interesting to find that other Governments than the British have that criminal, stupid, Philistine (and other endearing epithets to taste) blindness which allows collections of art to be exported. Twenty-five years ago Señor Nicholas Duque made, and deposited on loan in the Archæological Museum at Madrid, a notable collection of Spanish ironwork, largely mediæval. This has now come to England for sale, and may be seen at the Spanish Art Gallery, 50, Conduit Street, W. As the Spanish Government is reported to be on the point of following the Italian example, and forbidding the export of the relics of Spain's artistic past, such a magnificent collection is not likely again to be seen in England. The outstanding feature of the work is the free (at times almost wanton) use of repoussé. As in the case of the exhibition of German ironwork, which we noticed in May last, the exuberant fancy of treatment is in strong contrast to the sobriety of contemporary English work. The relief of the beaten work has to be measured in inches. The washers of the nails with which church doors were studded run up to eight inches in diameter, and two inches is a common projection. One door would have

dozens of such washers, which indeed produced the impression of armour-plating. In the collection are about five hundred specimens of these washers, some of which are plain and bold, others treated with great elaboration of flower ornament. Spanish ingenuity (at least in Segovia and the adjoining provinces whence this collection was



SPANISH IRONWORK :  
REPOUSSÉ STRIPS ON COLUMN.



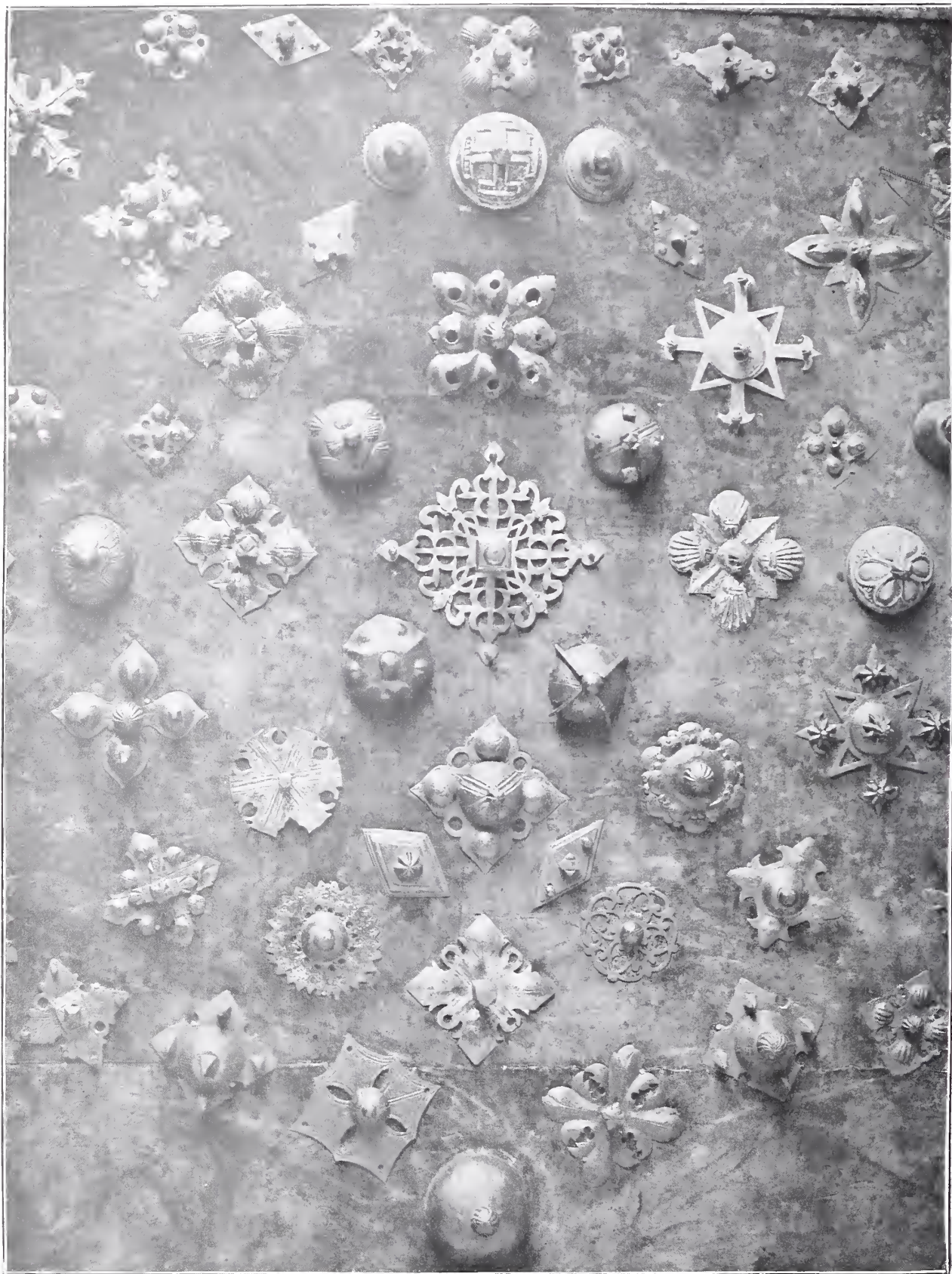
SPANISH IRONWORK : A KNOCKER.

drawn) seems to have halted at these washers and the enormous and enchanting knockers. There is nothing to match the great English hinge-plates, but the knockers are a revelation in grotesque animals and in the treatment of rings.

There are great repoussé panels of the Virgin and Child, and other figure studies which at some distance look like cast reliefs.

Among the later work of Renaissance times are great repoussé leaves which evidently decorated gates and screens, chiefly gilt. In one case a head in relief is painted in natural colours, as the eighteenth century used to trick out its garden statues. There is a series of panels about 6½ inches deep, one dated 1576, which appears to have served as a frieze, taking the place of plaster, and very effective it is. Shields of arms seem to have been favourite subjects for this treatment. One peculiarly fine example, elaborately quartered,





SPANISH IRONWORK : DOOR NAILS AND WASHERS.



is built up of many pieces, and the whole is gilt and blazoned in its proper colours.

Perhaps the most unusual, at all events the most un-English, use is the covering of columns with narrow vertical beaten panels divided by mouldings. Here surely is an ideal treatment for to-day. A cast iron or reinforced concrete column could have no more appropriate enrichment. These panels are miracles of gaiety in design and in the recognition of the limitations of strip decoration.

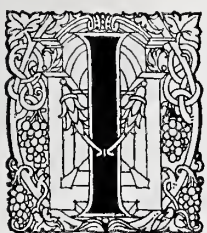
Passing to other treatments there is an espagnolette bolt with thick steel plates most delicately pierced and the flat surfaces exquisitely inlaid with brass. More like the English and German work are the caskets with pierced steel tracery coverings. One of these, however, has late florid escutcheons as well as purely mediæval tracery. The former are evidently an addition to the original box. The grilles are close and elaborate. Some have angry-looking spikes sticking out horizontally, a suggestion of jealous guarding intensified when one sees the hand-crushing irons, the chained collars for attaching the unruly to a wall, and other pleasant dungeon furniture popularly associated with Torquemada.

There are bunches of leaves, that doubtless formed parts of railings, wrought with amazing naturalism.

Such fittings as latch handles are not particularly distinctive. They might have come from the low countries, but it is very likely that the type of back-plate and character of outline which we associate with Flemish ironwork had its root in Spain. In general one may say that the Arabesque element is not so marked as might be expected, and that the fineness of workmanship brings some of the objects, such as processional crosses, more into the category of goldsmith's than ordinary smith's work.

The exhibition may be inspected on presentation of a card. It is too much to hope, perhaps, that some art lover will produce the few thousand pounds required to keep the collection in England and signalise the approaching occupation of the new South Kensington Museum by depositing it there.

\* \* \* \* \*



IN a recent issue of *The Western Architect* (U.S.A.) appeared a little story of a certain architect who, on his entrance at an architectural *soirée*, appeared clothed in immaculate evening dress; but directly he turned it was seen that the back part of his garments was an untidy mass of red flannel. As his

continued presence at the function seemed likely to provoke discord, he was, in the words of Mr. Dooley, "thrun out," gently but firmly, and in the ante-room disclosed the reasons for his untoward appearance to Mr. Glenn Brown, the Secretary of the American Institute of Architects.

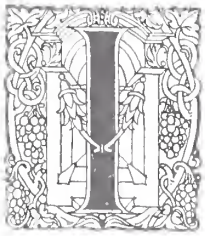
His story contained a moral on modern American architecture, which runs to frontages of costly and classical design, with flanks and backs of appalling and unconsidered ugliness. In his raiment he had tried to exemplify this growing practice, with the intention of horrifying the company against a trait not a whit less reprehensible in clothes than in architectural design.

The evil to which this martyr drew such forcible and unappreciated attention is not unknown in this country, though it is less common now than it was. The Nonconformist places of worship erected during the "fifties" and "sixties" of the nineteenth century provide many examples; immense classic porticoes, in the manner of Greek temples, presenting a bold face to the world, while concealing a back box structure of common stock brick-work.

But if the Royal British Architect has improved in the matter of spreading, as one of the fraternity has it, "the butter more evenly over the bread," the tops of his buildings are still very deficient. A close inspection of the tops of London gives one "furiously to think." There is much to be said in this respect for the classic copyist who hides his untidy roof features behind a correct balustrade. But the architects of large office and hotel buildings which rise high above their immediate neighbours should remember that more of these structures will be seen than the engaging façade on which they have lavished attention, and that with these buildings nowadays the roofs seem to have an outcrop of untidy structures, often of wood or galvanised iron, which we presume cover water tanks or lift machinery, but which might obviously be considered and arranged for.

What brings this particularly to mind is the west flank wall of the Waldorf Hotel in Aldwych. If the Waldorf Theatre was an old building, or likely to be demolished in the near future and replaced by a building of height equal to its neighbour, there would be little to grumble at. But the theatre is one of London's newest playhouses, and the red-brick flank wall of the hotel, with an untidy arrangement of soil-pipes which towers above it, is a conspicuous and unpleasing feature in the fine view of the new street from the corner of Lancaster Place. Architects have not always the free hand they desire, but as the majority of people will see the building from the Strand, it was worth while considering the exposed flank equally with the fine façade.





IN Professor Baldwin Brown's "Rembrandt," reviewed elsewhere, there are some observations on amateurishness in painting which have a sound architectural analogy to-day. The word is not meant abusively, but to convey a description sufficiently precise of an attitude towards art, whether pictorial or architectural, which is peculiarly English. It is a quality manifested by some of the great ones. As Professor Baldwin Brown acutely observes, there was amateurishness in Reynolds's incessant experiments in new painting media; Millais was a brilliant amateur, in whose work the principle of "hit or miss" seems to predominate. In this sense there are no amateurs in France. Both painters and architects are purely professional. They have mastered their technique, they are satisfied with it, their work rarely dishonours their capacity for achievement, and equally rarely rises to anything much above its own average. The amateur is not necessarily less skilful, or less endowed with a feeling for right work. He may be more gifted, but he will be less certain. He may make more blunders, but his arrival (if he arrives) will be more distinguished. Amateurishness is the English way. Was there ever so buoyant and unrepentant an amateur as Wren, ever devising new combinations, ever restless in endeavour?

It is perhaps because we have no authoritative École des Beaux-Arts that this spirit is equally operative to-day. Architectural education in Great Britain is levelling up fast, but some of those most intimately qualified to judge are very far from convinced that the level of future design will be much higher. In any case, it may be hoped that amateurishness in its best sense will continue to flourish, and that the almost boyish gaiety which informs so much of the best work of to-day will not settle down into a middle-aged reliance on safe methods only.

\* \* \* \* \*



ONE remembers in Mr. Anstey's "Voces Populi" the nature of the interest taken in cathedral architecture by one of Mr. Anstey's characters. It was not only vulgar, but disrespectful. At the recent Lord Mayor's Show (we cannot bring ourselves to call it a Pageant, even to oblige Mr. Louis Napoleon Parker) there were many "voces" which described with greater or less point and fluency the mediæval garb of the procession. With the graceful comparisons of

helms to saucepan-lids the daily press has already acquainted us. One gem of architectural criticism has, however, escaped report. The shrine of St. Edward, King and Confessor, a large gilt and painted structure on a dray, formed one of the features of the show. The present deponent stood in the crowd by two artisans, one short and unable to see anything, the other tall and so able to see the horsemen and the triumphal car with the shrine. The tall one enlivened his short friend's distress by graphic descriptions of the kings, priests, and nobles as they passed. The shrine, however, baffled him; words of description failed; "a big thing on a car" was hazarded and rejected as obviously inadequate; "I tell yer what, it's a shop!" Could graphic word-painting go further? Gray's Inn Road, which provides so many of our shop-fronts, should shiver with pride when it knows that the shrine of the Confessor calls up such moving memories in the hearts of οἱ πολλοί. But perhaps the education of the multitude is to blame. If so, let us call on Mr. Belcher to pursue with increased energy the education of the British public in the essentials of architecture. Westminster Cathedral has been freely mistaken for public baths and washhouses. The shrine of the Confessor is a shop. We tremble for the future.

\* \* \* \* \*



IT was an enlightened traveller who, speaking of Bruges, said it was a city of smells, a different one at every street corner, and all of them useless and horrible except that in the Central Station, which the porters used in their leisure moments to lean up against. This is an old complaint against an architectural Mecca; but while the art lover is prepared to endure the personal discomforts of a place for the sake of its artistic beauties, the average layman is impervious to most influences beyond the constant offence to his olfactory nerves. His attitude is one of indifference: "If this be Art, give me the other thing. If unsavoury smells are the inevitable accompaniment of picturesque beauties, I am that degraded being, a Philistine." And this is a serious attitude to cultivate in any man—or, worse still, to allow him to cultivate in himself. The eccentricity of genius, especially in the direction of Art, has usually been allowed a certain licence of untidiness, as to hair, clothes, surroundings, and handwriting. This accounts for the abnormal crop of geniuses in our own decade. Once the aspirant for notoriety has learnt the outward and visible expression of the inward grace, the world is speedily endowed with another individual whose mission and whose work can alone be appreciated by posterity.



Another mark of the genius is exceptional rudeness. This is stating a quality in coarse Anglo-Saxon; only rude people would so describe it; but some touch of genius must be allowed to the itinerant writer. To the genius himself this eccentricity of manner is "reserve force," "strength of opinion," "strong individuality," "contempt for mundane opinion," or any other high-sounding attribute that comes comfortably to his mind at the required moment. Is it not idle then for leading writers to labour the pages of our thoughtful reviews with discussions on the decay of manners? When all can be geniuses, who would be merely wise? Carlyle talked of genius as "an infinite capacity for taking pains." But Carlyle was a poor mediocre kind of writer whose dictum on the subject would not seriously be considered by any of the elect in this year of grace. The genius of the past age was less careful of his reputation and his pocket than of the imposition upon his neighbours and the world generally of some mental incubus which afflicted him, and from which he stood in urgent need of deliverance. His attitude to the crowd was that of the modern music-hall performer who prefaces his song with an intimation to the audience—"I don't know whether you'll like it, but you'll 'ave to 'ave it." In those far-off and hoary times the audience were not obliged to have it; if the genius was a writer, they could ignore his books; if a painter, they passed his canvases without a glance. Even the modern music-hall audience has the option of stopping its ears or receiving legal recognition for its wrongs by an urgent call to the bar. But in our own day a great and powerful Press, mainly built upon the proceeds of propagating pictorial phantasies for the young, catches our geniuses early and flings their opinions far and wide through the medium of giant circulations. And as one paper trumpets forth the feelings of its exclusive genius each day, its compeers in the gentle art of printing advertisements are just as vociferously engaged in refuting his dicta of the previous day, and advancing the more reasonable and subtle claims on public attention of their own bright particular star. So that from the exhausting contemplation of genius we are never really free.

But this is a digression. We started with Bruges and its dirt, and we have lapsed into genius. It remains to establish a connection between the two things. Genius, especially in Art, was usually associated by the Comic Press with a distaste for soap and water and an evident distrust in the skill of the barber. Not that this imputes anything against the members of our own R.A., for Messieurs the critics have so frequently explained that the artists among them are not geniuses, and the remainder are not artists, that obviously they are exempt. To follow up our artist genius,

however, he is, in the main, not repelled by dirt. It does not vex his artistic soul; he can live with it and seriously analyse its texture and apportion its value in a colour scheme. As we have already said, the dirt of Bruges is less obvious to him than its acknowledged beauties. Therein he differs from his layman brother, to whom dirt must ever remain matter in the wrong place. And it is the fate of the layman brother, or rather the layman sister, to be seriously afflicted with dirt. Societies are founded to get rid of it; the municipal machinery is set working to suppress it; public health authorities outline campaigns against it. Yet dirt flourishes, and nowhere more vigorously than in habitations whose features betray the artist hand. For, after all, why should a moulding be omitted because of the dirt that may lodge upon it? Why should texture be lost so that a surface may be washable? Why should domestic economy be considered, or concessions made to the debased work of cleansing?

Once upon a time some subtle but inartistic hygiene expert proposed a rounding of the junction between the floor and walls of a room so that the dirt could not effect a lodgment.

Why should skirtings, asks the Philistine, be finished in flatted white enamel or paint, so that the domestic may mark a dirty line on them each time she cleans the floor? Why not make them of marble or tiles or something easily cleansed? And why, if woodwork is to be finished white, is the gloss finish so reprehensible? Why should chimney-pieces, necessarily the dustiest places in a room, be so often endowed with a multitude of shelves and ledges to accumulate dust? Why, again, should the chimney-piece be so elaborate, seeing that the fire, which is its *raison d'être*, is absent for more than half the year? Is it any particular pleasure to view the inhabitants, by force of habit, sitting round the empty grate in the middle of summer? One does not keep the tea-cups perpetually on view in the drawing-room, because afternoon tea is occasionally or habitually served there. Why not have some arrangement for shutting off the grate in summer instead of wasting money by killing ferns in the cold draught? Why not have jointless floors? Why not metal ceilings, put up in large sheets, instead of the plaster which is always tumbling down?

The foregoing contains just a few questions of a layman critic, so satisfied of his own opinions that he afforded no opportunity for the introduction of counter replies from an unwilling listener.

After all, retreat was the most dignified course. One cannot argue with crude ideas, or with arguments that spring from a mind devoid of the most elementary conceptions of art. Nor can one advance reasonable answers to questions that arrive at the rate of three a minute.



# Modern Leadwork.

## II.—RAIN-WATER HEADS.



THE revived interest in the use of lead for pipe heads and gutters has had to struggle with some rather evil influences.

Since the end of the eighteenth century, when the traditional treatments of lead died out, cast iron has held almost undisputed sway. It is true that the conditions of modern building usually put lead pipes and heads out of the question on the simple score of cost. Moreover, cast iron, if reasonably heavy, is a quite satisfactory material; it only becomes ridiculous when historical leadwork is used as a slavish basis for its design. There is, happily, a growing perception that cast iron has a character of its own, and that it can be treated to look like itself. When, however, lead as a decorative material was rediscovered, chiefly through Mr. Lethaby's little book, the ideas of leadwork design were quite incoherent. Some astonishing results followed, notably the transfer to leadwork of the sense of sharpness which is proper to iron but distressingly comic in lead. The happy mean in leadwork is to secure easy, gracious lines without degenerating into amorphous sloppiness.

Amongst some craftsmen there is a tendency to be frightened by the softness of lead. While it is true that care should be given to its proper support, there is no need to treat it as though it were treacle and altogether unable to stand

by itself. I have heard very strong criticism of light parapet work such as the brattishing on the head of Fig. 22.

This seems to be in the nature of cavil. There are scores of pipe-heads three centuries old which bear enrichment of this kind. The fact that it has survived undamaged seems justification enough of the treatment. It would be obviously foolish to attempt lace-like effects in a situation where there is any risk of the lead being struck; but on the top of a pipe-head, or as a decoration of the long pipe of a gas pendant (see last month's article, Fig. 16), such effects are perfectly legitimate.

It is easy for sound general principles as to the right uses of any material to develop into dogma, and dogmatism in the region of art and craft is a fettering habit of thought.

One of the difficulties involved in the use of the eaves gutter is the swan-neck from the gutter to the pipe head. It is a practical necessity, but generally an ugly one. I illustrate two efforts to get away from the ordinary type. Mr. Bankart, in the example of Fig. 19, has effected a rather cumbersome alternative by interposing between the gutter and the pipe head an intermediate head of large projection. The result is not, I think, in any way so successful as a method adopted in 1895 by Mr. H. Wilson at Welbeck Abbey (Fig. 20). Here the swan-neck is recognised as a practical need, and, so recognised, has been decoratively treated. This treatment is as original as it is



FIG. 18 —CHARWELTON CHURCH.



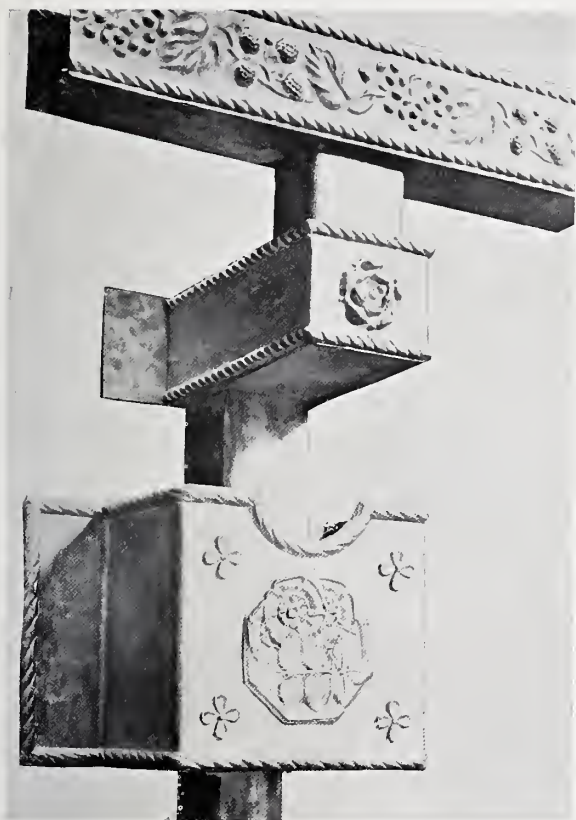


FIG. 19.



FIG. 20.—WELBECK ABBEY.



FIG. 21.—WHITWICK SCHOOLS.

successful, and gives an idea which may well be repeated—viz., of regarding the swan-neck and head as two parts of a whole. The projecting lip on the front of the head not only prevents an awkward break in the line of the swan-neck, but pulls the two parts together in a very happy way. The bulged and pierced treatment of the pipe socket recalls a similar device on a lead gargoyle at Hardwick Hall, and it can also be seen in the piscina outlet of Fig. 29—C. (The same device appears on the stem of a pewter sepulchral chalice of the thirteenth century which is in the possession of the Society of Antiquaries.) The least usual feature is the little superstructure of slim lead balusters. It is simply ornamental, as it does not suspend the head, which is supported beneath by stout iron staples, and I am not clear that these balusters are a very wise addition. The decora-

tive treatment of the head is admirable, both in the soft modelling on the projecting lip and swan-neck done by Mr. H. W. Finch, architect, and in the simple piercing of the ears.

The head of Fig. 21 is a successful translation, as to treatment, of the pierced heads which we find at Knole and Haddon Hall, but it is entirely modern in feeling. It was designed by Mr. Arthur Grove, architect, and made by Mr. Gilman of Reading. The little shell-form ornaments beneath the rope moulding give an agreeable spottiness, and the increased projection of the left-hand end and its funnel outlet preserve the character of pipe head. Long heads are apt to degenerate into simple gutters and so lose their character.

At Charwelton Church, Mr. Christopher Carter, architect, has designed an admirable system of water leadwork (Fig. 18). The parapet gutter guides all



the water from the low-pitched roof to the break over the trough gutter, which in turn discharges into a funnel-shaped pipe head. The stone corbels on which the trough rests give an easy sense of stability. The pierced valance which hangs from the lead parapet is in pleasing alignment with the trough, and reverts (no doubt unconsciously) to an early Aberdeen use of such decorative lead valances. The arrangement is altogether well conceived, and the ornament thoroughly suited to the material and yet modern in feeling.

The two heads of Figs. 22 and 23 tend more to the feeling of historical leadwork, the former particularly. Mr. F. S. Chesterton would seem to have studied the Knole heads in deciding on a turreted type, as Mr. Lutyens has done in some of his leadwork. In one detail Mr. Chesterton is delightfully archaic, but with entire success. Hardened students of leadwork may be excused if they get a shade weary at times of rope mouldings. The horizontal bands in this case are of lead strip, twisted and soldered on. This treatment occurs at so early a date as on an Anglo-Roman coffin at York (a far cry for a precedent),

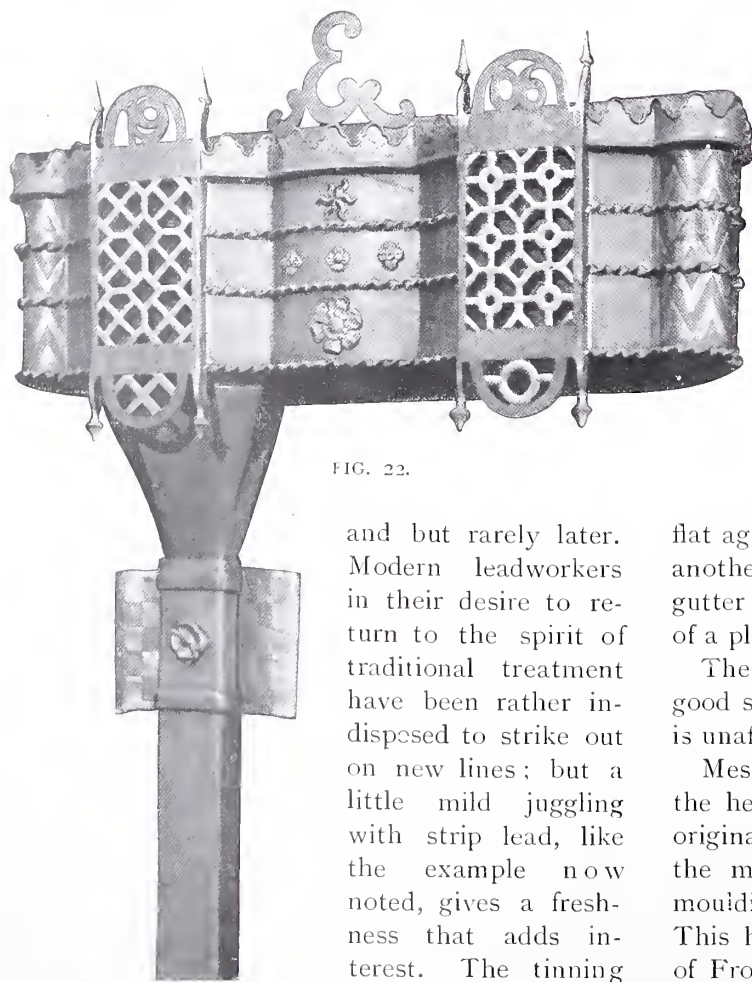


FIG. 22.

and but rarely later. Modern leadworkers in their desire to return to the spirit of traditional treatment have been rather indisposed to strike out on new lines; but a little mild juggling with strip lead, like the example now noted, gives a freshness that adds interest. The tinning

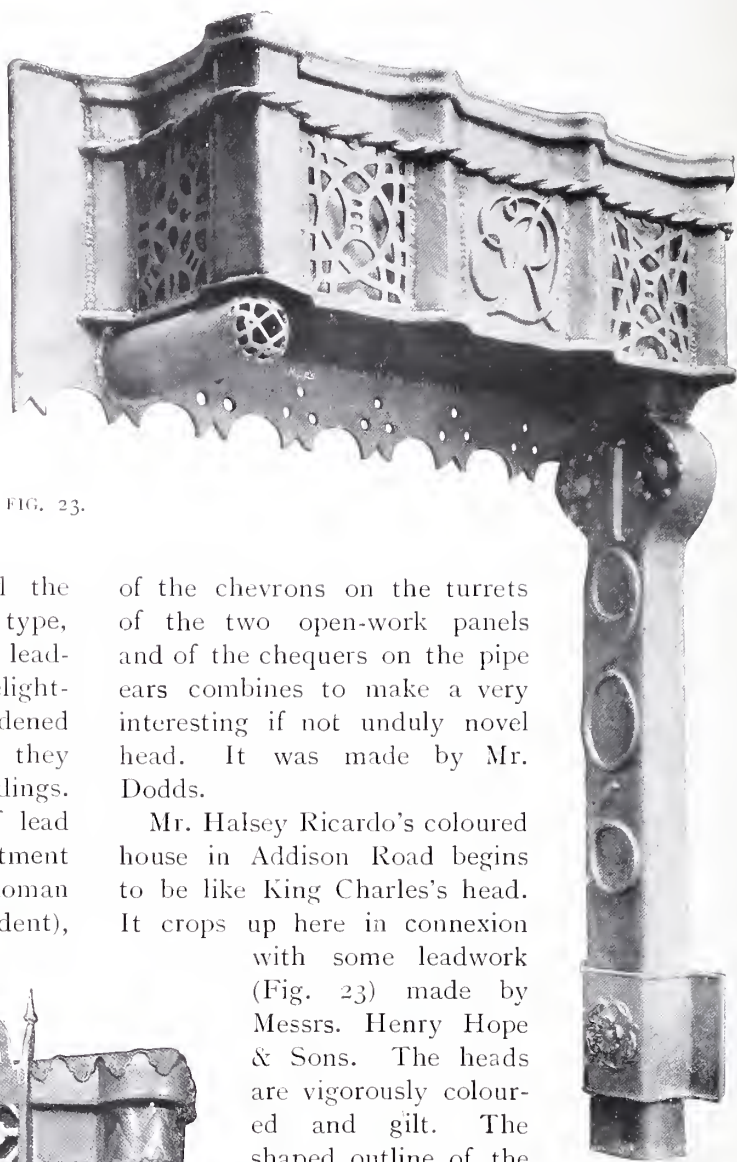


FIG. 23.

of the chevrons on the turrets of the two open-work panels and of the chequers on the pipe ears combines to make a very interesting if not unduly novel head. It was made by Mr. Dodds.

Mr. Halsey Ricardo's coloured house in Addison Road begins to be like King Charles's head. It crops up here in connexion with some leadwork (Fig. 23) made by Messrs. Henry Hope & Sons. The heads are vigorously coloured and gilt. The shaped outline of the back continued below the box of the head is a new idea to me. On some heads at Torrington, North Devon, there are pierced and shaped ears, and in some rather degraded late eighteenth-century heads the back plate is shaped, but the old people generally kept to square outlines for any sheet work that was flat against the wall. The shaping is, however, another legitimate opportunity for variety. The gutter of Fig. 25, also made by Messrs. Hope, is of a pleasant formality.

The head of Fig. 24, made by Mr. Dodds, has good simple outlines, and the pierced ornament is unaffected and pleasant.

Messrs. Wimperis and Best have succeeded (in the head of Fig. 26) in a design showing some originality of form without any ill-treatment of the material, by no means an easy task. The moulding of the top is gay without being trivial. This head is from the works of Messrs. Singer of Frome, who also made the example of Fig. 28,



designed by Mr. J. S. Gibson. The latter cannot be regarded as very successful or indeed characteristic leadwork. The rather hard lines of the general outline and of the interlaced detail would be more appropriate to cast iron.

The majority of such modern pipe heads as are designed and made on right lines are built up of cast sheet metal. Messrs. Singer use both this method, which is simple plumbing, and also box patterns such as are employed by iron-founders. There is much to be said for the latter method, particularly where several heads are to be made of one design and size, but it is an objection that the surface of the lead is always a sand surface. The method of building up from cast sheets gives the alternatives of using either the sand surface or the cooling surface. Furthermore, with box patterns there is more temptation to depart from a natural treatment of the metal,



FIG. 24



FIG. 25.

and indeed entirely to forget it.

The barber's pole and chevron decorations of the head of Fig. 27 (Mr. Bankart) are done in bright tinning, and the design generally is simple and appropriate. It is based on the turreted fancies of the seventeenth century, but with enough difference to make the feeling frankly modern. The shaping of the top edge gives it an architectural character, yet without affectation.

Of Mr. Bankart's heads illustrated in plate No. 29 it may be said that they show originality while they preserve the right traditional feeling. The example D is one of a series fixed at Manchester Cathedral. The lily, St. George and the Dragon, and the fleur-de-lis are the chief tinned ornaments, and are appropriate enough, for the cathedral is dedicated to the Blessed Virgin, St. George, and St. Denys. The St. George ornament needs special comment. It



FIG. 26.

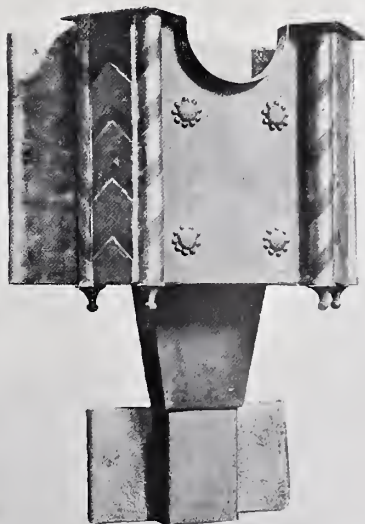
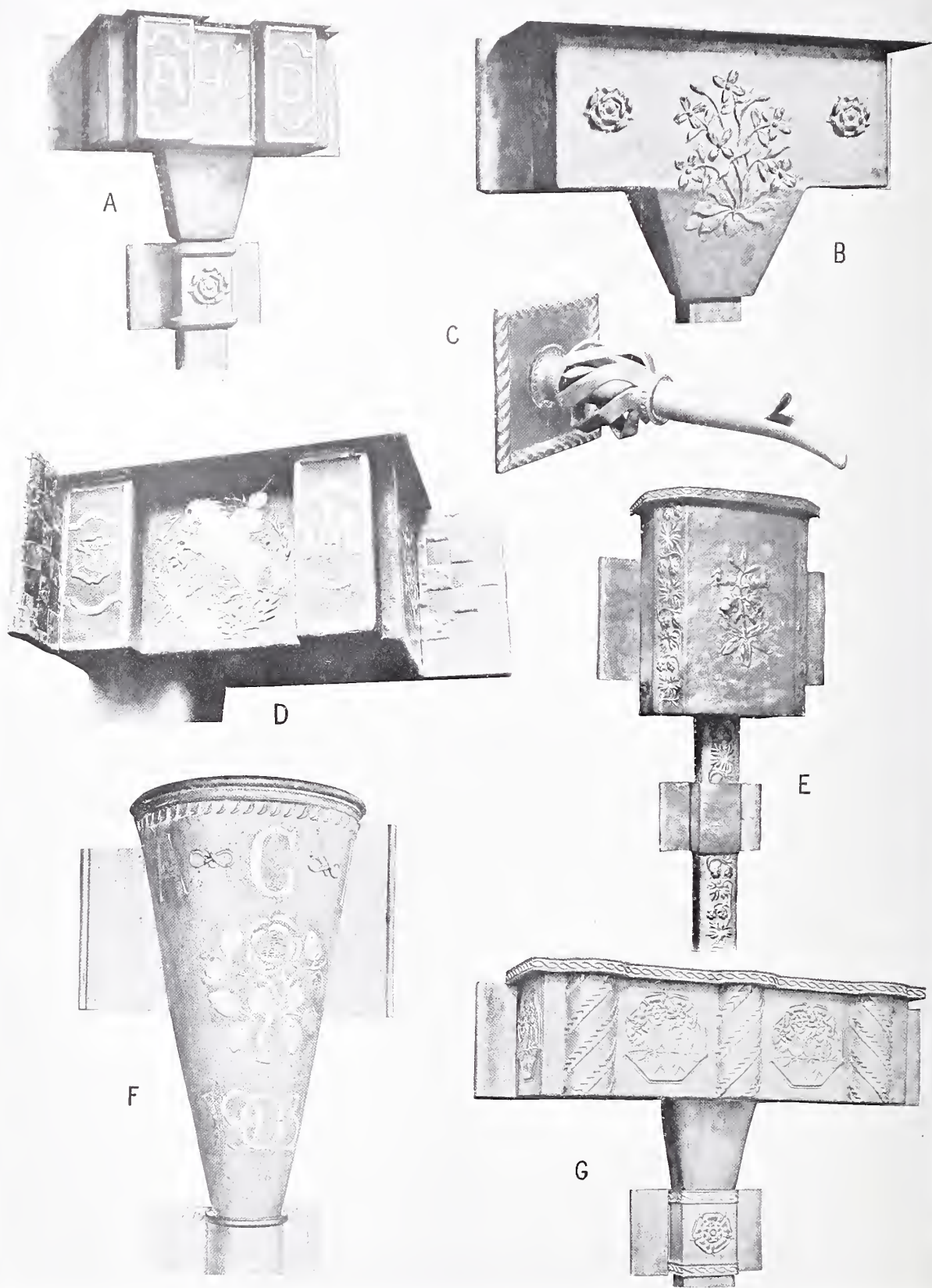


FIG. 27.



FIG. 28.







is almost pictorial; and though there is ample historical authority for masks and small figures in cast relief, I know of no similar use of tinning for figure work. The treatment is, however, purely conventional and seems perfectly justified. The long plain funnel of F is a happy example of the pipe head reduced to its simplest and most practical form. The floral ornament redeems it from baldness, and the head is a pleasant change from the sometimes distorted and troubled outlines which derive from wild searches after originality. The character of the flower ornament is sound. Some of Mr Bankart's early work showed an undue delicacy in its surface ornament, and suggested embroidery rather than leadwork, but his later work is masculine and unaffected. Heads B and E are good, but I think the "embroidery" criticism may be levelled against them to a small extent. The surface decoration of the pipe of E is attractive. A is a straightforward design, and G a well-balanced head on early seventeenth-century lines, yet modern in detail. The spout C shown also on the plate is illustrated among pipe heads as it might very well be a gargoyle. It is fixed on an external church wall to discharge water from a piscina into an earth drain, an open-air arrangement which seems open to some liturgical objection.

Messrs. George Wragge, Ltd., have carried out many important pipe heads to the designs of various architects. The example of Fig. 31 was made for the restoration of Horsley Hall, Hexham, to the design of the architect, Mr. G. H. Kitchin. It is a sober thing, in strict subordination, as heads should always be, to its architectural surroundings. The head of Fig. 30, also made by Messrs. Wragge, is one of the simple sort welcome on any building, and markedly better than a head full of design, unless the design is restrained and appropriate.

The illustrations of this article go to show, I think, that there is no lack of idea both in the design and workmanship of modern pipe heads.



FIG. 30.

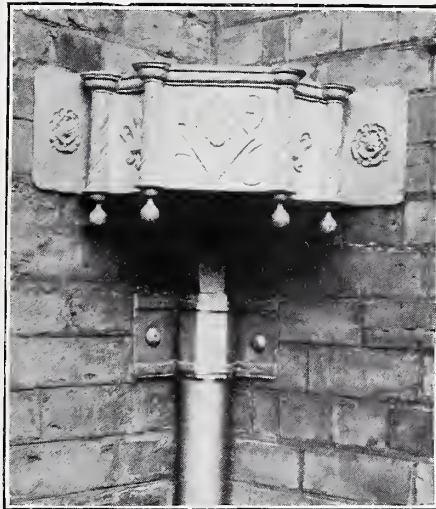


FIG. 31.—HORSLEY HALL.

The ideas are good, but they are not spread enough. The number of people who make lead pipe heads of merit is distressingly few. The fault lies rather with the average plumber than with the average architect. There is a clear enough call for good design and for a return to intelligent methods, but nearly all the "ornamental" leadwork done at technical schools is unspeakably bad. I take up my parable with the first volume of a book on plumbing now in course of publication, which is written by sixteen experts. From the technical side it is full of admirable information, and possibly could not be bettered. Mr. John W. Hart, who is responsible for one section of this work, is a past master in all the *arcana* of wiped joints and seam rolls, and a technical instructor of parts;

but in one chapter he lets fly on "ornamental" leadwork, and illustrates a pipe head which he sets to his students. It is simply dreadful. Until the authorities who govern technical schools realise that the art of leadwork must be taught by an artist, who will work side by side with the technical expert, these grievous productions will be thought by the rising generation of plumbers to be "artistic" leadwork. There are, of course, honourable exceptions. Professor Lethaby and Mr. F. W. Troup have struggled manfully to im-

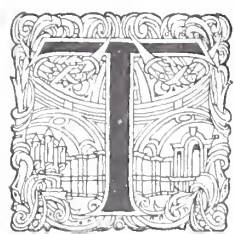
port a new spirit among L.C.C. students, and individual architects have sought to instil into the mature plumber some right feeling for his material. In practice, however, if good leadwork is wanted, the few firms who specialise are the only sources of supply. The Worshipful Company of Plumbers has done more perhaps than any other of the City Companies to support and improve the craft it represents. If the Company would devote a tithe of the energy which it gives to registration and to improving technical excellence, to some instruction in artistic righteousness, it would be doing a good and greatly needed work.

LAWRENCE WEAVER.

(To be continued.)



# Morden College, Blackheath, Kent.—I.



THE interest attaching to almshouses, homes of rest, and the like, may be in part sentimental, but there is probably no class of building which so readily lends itself to picturesque design of a quiet sort, so that they possess in addition a charm to the architect which is independent of the sentimental interest altogether. It is worthy of note also that in most cases, and certainly in the most successful from the architect's point of view, this picturesque quality is obtained by no sacrifice of architectural truth, but rather by allowing a well-thought-out plan to shape the external design.

The necessity for economy, both in the materials and their use, has in most cases dictated the quiet style in which they are built, yet this once more is gain rather than loss to the student, teaching valuable lessons in the elimination of unnecessary detail, and throwing him back upon the study of scheme, the bed-rock of design.

Many articles have appeared upon particular examples of the type of building under consideration, and illustrations in large numbers may be

found, especially in books dealing with the work of the Renaissance in England. Among the lesser known examples may, however, be mentioned Cobham College in Kent, earlier, and Berkeley Hospital, Worcester, later in date than Morden College, and of both illustrations are given.

The college at Blackheath stands very much as originally built, hidden away in its own grounds in the south-east corner of the heath, and a casual visitor would hardly be aware of its existence. It is, however, well worthy of a visit, since the characteristics mentioned above as typical of this class of building are in it exemplified to the full.

The college was founded about 1695 by Sir John Morden, Bart., as a home of rest for reduced gentlemen, merchants of the City of London, "for whose relief of all the foundations in and about London for distressed people of all sorts there had been none erected hitherto."

Sir John himself had tasted adversity, and had a fellow-feeling for those in his own position of life who, through no fault of their own, might suffer losses in trade and be likely to feel the pinch of want.

He appears to have been the only son of George Morden, Esq., of London, citizen and



COBHAM COLLEGE, KENT: QUADRANGLE, LOOKING SOUTH-EAST.

DRAWN BY T. FRANK GREEN.





COBHAM COLLEGE, KENT: SOUTH SIDE.  
DRAWN BY T. FRANK GREEN.

goldsmith, and Mary, daughter of Thomas Harris, Esq., of London. He was created a baronet in 1688, and the title died with him. A record in the Heralds' College gives the date of his birth as

August 23rd, 1623; but the parish register of St. Bride's, London, in which parish he was born, mentions the date as the 13th. Such registration errors, however, are not unknown, even in recent



COBHAM COLLEGE, KENT.  
THE QUADRANGLE, LOOKING NORTH-WEST.



BERKELEY HOSPITAL, WORCESTER.

*Photos: T. F. Green.*





THE MAIN ENTRANCE.

Photo: E. W. M. Wonnacott.

times. In the Register of Pedigrees of the Heralds' College bearing his arms and crest, and attested by his signature, he does not trace his ancestry higher than his grandfather, Robert Thurlow, of Suffolk: nor does the certificate of his death, drawn by the Somerset Herald of Arms, contain more than mere mention of the names of his father and grandfather, whereas it enters minutely into the kin of Dame Susan, his wife, the daughter of Joseph Brand, Esq., of Edwardstone, Suffolk, and gives the names and matrimonial alliances of her brothers, sisters, and the names of their descendants.

Stow gives the arms of Simon Morden, Mayor of London in 1369, which are the same as those borne by Sir John, which are argent, a fleur-de-lys gules, with the arms of Ulster; with crest a lion passant; those of the Brands, his wife's family, being azure, two swords in saltire argent, the hilts or, with a border engrailed of the second.

At the period of Sir John's entry into commercial

life, the members of the Turkey Company were carrying on an extensive trade with the Levant in woollen cloths, lead, pewter, copperas, logwood, and pepper. They also took out with them dried fish, sugar from British colonies, and other produce, which being sold in Portugal, Spain, and Italy for pieces of eight, gave them the wherewithal to purchase homeward cargoes. Sir John became a member of this company, and was very successful in his transactions, entering into them personally, and even undertaking a voyage to the Levant, where he is supposed to



Photo: Percy Green.

PORTRAIT OF THE FOUNDER.  
FROM AN ENGRAVING.

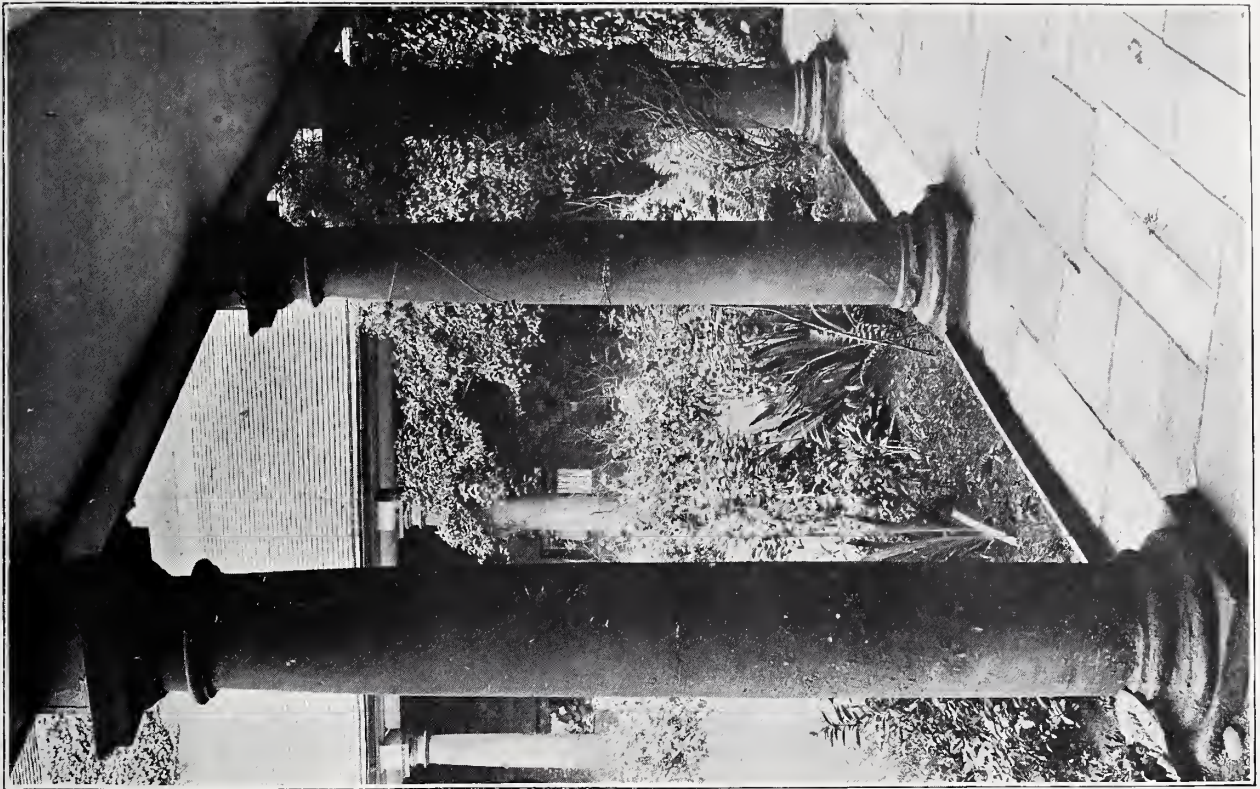
have resided for some time, Stow saying that "he returned from Aleppo with a very fair estate." He at this time enjoyed great worldly prosperity, and owned many ships; but the tenure of riches was then, as ever, precarious, and he lost the whole of his property and was reduced to poverty. There are several traditions relating to this sudden reverse, but it is not quite certain how the loss came about. It seems, however, probable, from some expressions in his will, that his fleet was lost at sea. Whether this was so or not, the



THE NORTH WING FROM QUADRANGLE.

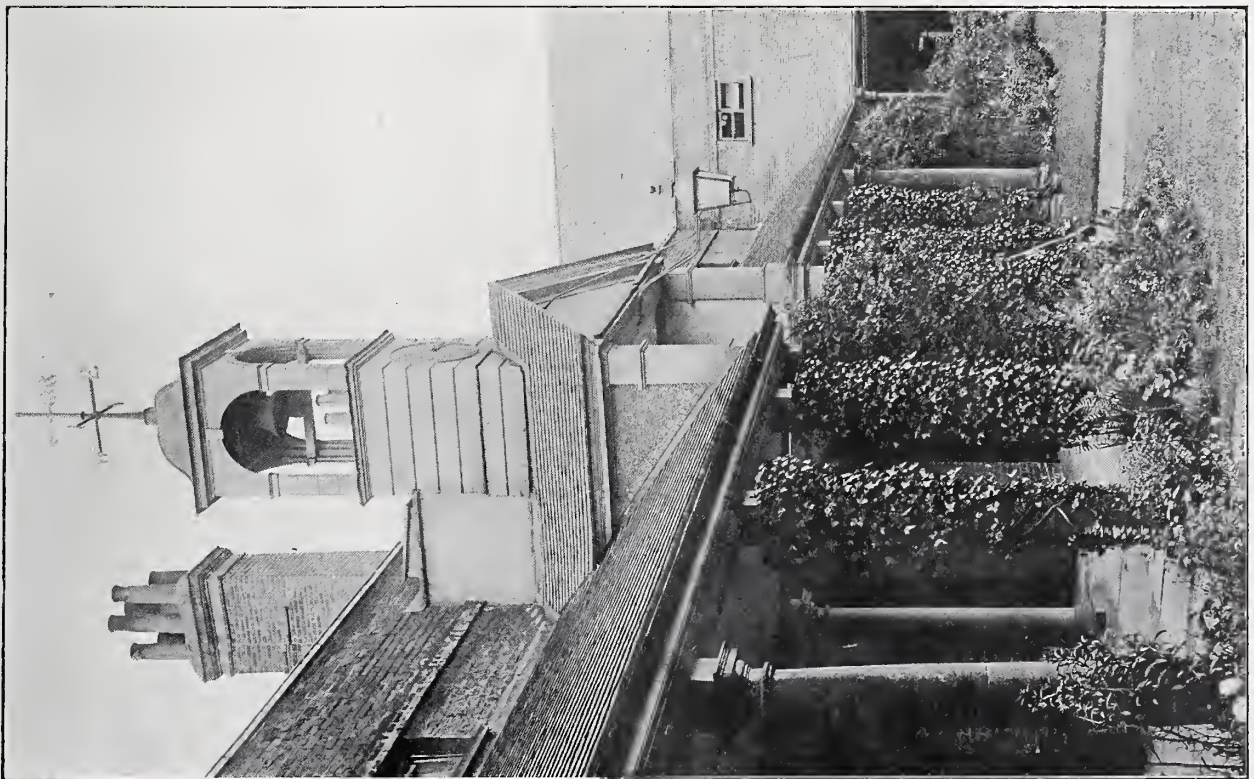
Photo: E. W. M. Wonnacott.





*Photos: Alan Potter.*

BROMLEY COLLEGE: PART OF QUADRANGLE.



BROMLEY COLLEGE: THE QUADRANGLE.





BROMLEY COLLEGE: THE GATES.

Photo: C. H. Freeman.

following tradition, current in the college about one hundred years ago, is interesting:—

Sir John Morden, having resided many years at Aleppo, shipped the whole of his merchandise on board three vessels, and sent them on a trading voyage, *en route* for the Port of London. He then, with his family and the remainder of his property, embarked on a ship bound for the same place, where he intended to settle. Arrived safely, he sought news of his ships, but could obtain none, and as year after year passed away without tidings they were finally given up as lost. Sir John was by this time reduced to such poverty that he was obliged to take service with a tradesman, who employed him to wait upon customers for orders. Waiting in the hall of a gentleman's house one day, he overheard him reading from a newspaper the astonishing piece of intelligence that three ships supposed to be lost, not having been heard of for ten years or more, had arrived at London, heavily and richly laden. Sir John instantly ran into the City to learn further particulars, and found they were his own missing vessels. In the joy of the moment he made a resolution that he would out of his now recovered wealth found an asylum for decayed merchants, "so that none other might thereafter be reduced to the extreme penury he had himself endured."

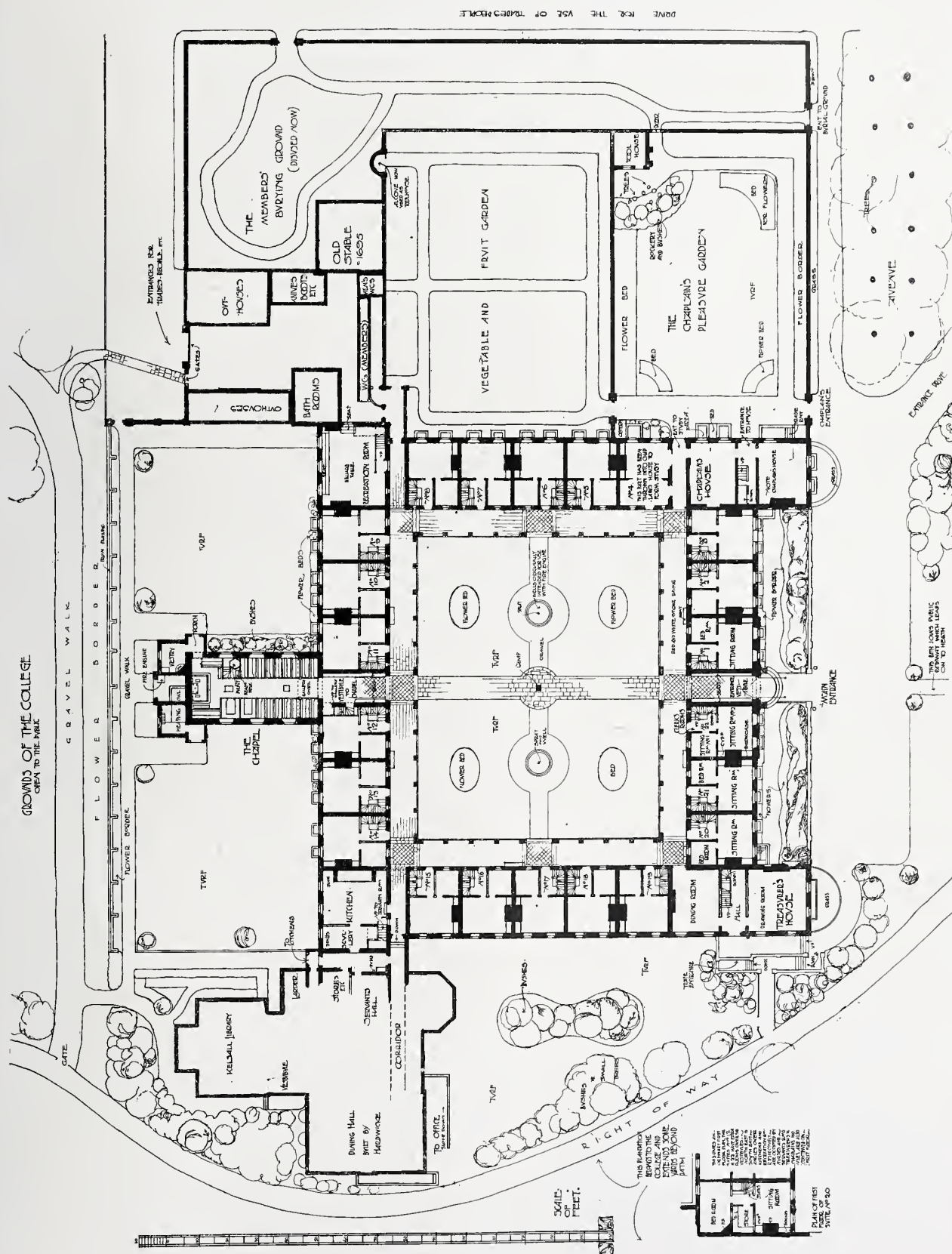
In due course this resolution was ready to be carried out, and he accordingly visited Bromley

College, then recently erected, or possibly in course of building, and making himself conversant with its arrangement, instructed Sir Christopher Wren to prepare a design upon similar lines for the building we now see. The site selected was in a field called the "Great Stone Field," adjoining Sir John's manor of Wricklemarsh, where he then resided.

In parenthesis, it may be noted that this manor belonged in 1598 to Robert de Vere, son of the Earl of Oxford. After Lady Morden's death it was, in 1723, sold to Sir Gregory Page. He pulled down the manor house and built a magnificent stone mansion in its place, which was designed by John James of Greenwich, and is said to have been completed in a year. Bequeathed to his grand-nephew, Sir Gregory Page-Turner, it was finally sold in lots, and the house destroyed in 1787, the building estate of Blackheath Park being developed on the site.

In addition to defraying the cost of building the college, Sir John also amply endowed it by his will of October 15, 1702, with the whole of his estate, "both real and personall," subject to a few small legacies and to a sufficient income and property being retained by Lady Morden during her life to enable her to live in a style befitting her position, the whole being at the disposal of the college at her death. These dispositions occupy the first part of the will, the







remainder dealing with the foundation and endowment of the college, its rules and officers, its management, and the pensions to be paid to members. Mention is also made of the "gownes all alike" which they are to wear. Unfortunately no pictorial record of these seems to exist, and a writer in the "Strangers' Guide" of 1787 says that the gowns with founders' badge formerly worn had not even then been in use for some years. The badge was of silver, oval in form, bearing the arms of Morden and Brand.

There were to be in the college as many poor merchants as the foundation would maintain, who were to have rooms and £20 yearly each. The officers were to be a treasurer at a salary of £40 a year; a chaplain at a salary of £30 a year, each residing in the college; further, a cook and butler, the latter also to be clerk of the chapel, were also to be provided at £10 a year each, with board and lodging. The management was to be in the hands of visitors or trustees appointed by the will (including Sir John's wife, Dame or Lady Susan), for whose entertainment during the yearly visitation a sum of £10 was to be set aside to be expended in a dinner to themselves and provender and stabling for their horses; and rooms also were to be provided for the reception of the visitors.

At the decease of any two of them, other Turkey merchants were mentioned as their successors. At the death of these, further trustees to fill the vacancies were to be chosen from the Turkey Company to keep the numbers up to seven, and "if that company fail," says the will, "then they should be chosen out of the East India Company," "and if that Company fail," then out of the Court of Aldermen of the City of London, "and if the Court of Aldermen fail" the visitors then surviving should at the death of any one of the seven choose a gentleman of Kent to fill the vacancy.

A codicil states that as the House of Commons has rejected his application for a remission of taxation for the college, he is obliged to reduce the yearly pension to £15, and after his death, "some portions of the estate not answering as well as was expected," Lady Morden was obliged to reduce the number of members also, which was, however, at her decease again increased.

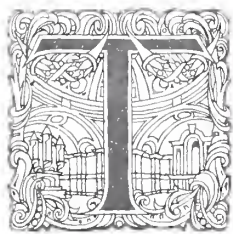
The increase in the value of the property held by the estate has since much enlarged the scope of the charity, and not only are the pensions to members and salaries of officials now more liberal, but a number of out-pensioners receive relief.

T. FRANK GREEN.

(*To be continued.*)

## The Royal Army Medical College and Laboratory, Millbank, London.

Woodd and Ainslie, Architects.



THESE buildings have been erected, under instructions from the Army Medical Advisory Board, for His Majesty's Government as the headquarters of the Army Medical Staff in London, to replace the educational department at Netley, now abandoned.

They consist of two blocks, and occupy a fine site overlooking the river and embankment immediately adjoining the Tate Gallery.

The southern portion is entirely devoted to officers' quarters, and consists of the various mess-rooms, commandant's house, mess-man's quarters and offices, kitchen, and accommodation for seventy-six resident officers.

The northern block is given up to educational purposes, and is divided into two departments—hygienic and pathological—arranged round a central lecture theatre, and has been designed to harmonise more or less with the barrack buildings

adjoining, so as to lend a certain amount of uniformity to the parade-ground.

The river frontage, unfortunately, could not be extended, as the authorities were desirous of retaining the small ornamental garden which forms a pleasing adjunct to the south-western corner.

The buildings are of fireproof construction throughout, and the roof over residential block formed in concrete on constructional steelwork. The fireproof floors in both buildings were executed by the Frazzi Fireproof Construction, Ltd., who contracted for a provisional sum for the whole of the floor and flat-roof work, including constructional steelwork. These floors were finished with Rust's Vitreous Mosaic bedded on the floor. The whole of the partitions used in the buildings were also supplied and fixed by the Frazzi Fireproof Construction, Ltd. They are all three inches thick, built of Frazzi Excelsior Partition slabs. Grey granite has been used for the base of the building and the angle quoins generally, the remainder of the stone being





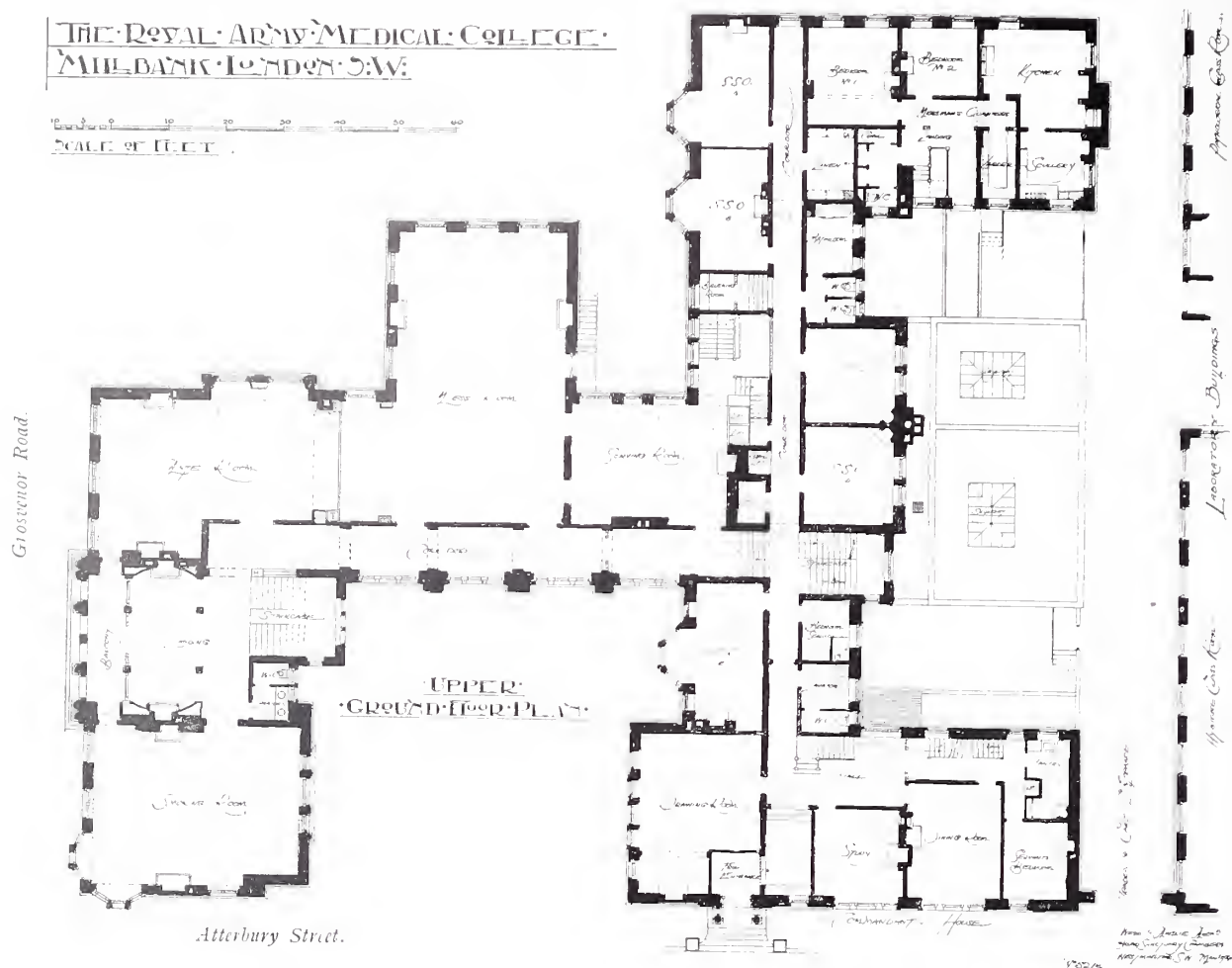
VIEWS OF THE COLLEGE BUILDING FROM GROSVENOR ROAD.

*Photo: Arch. Review Photo. Bureau.*



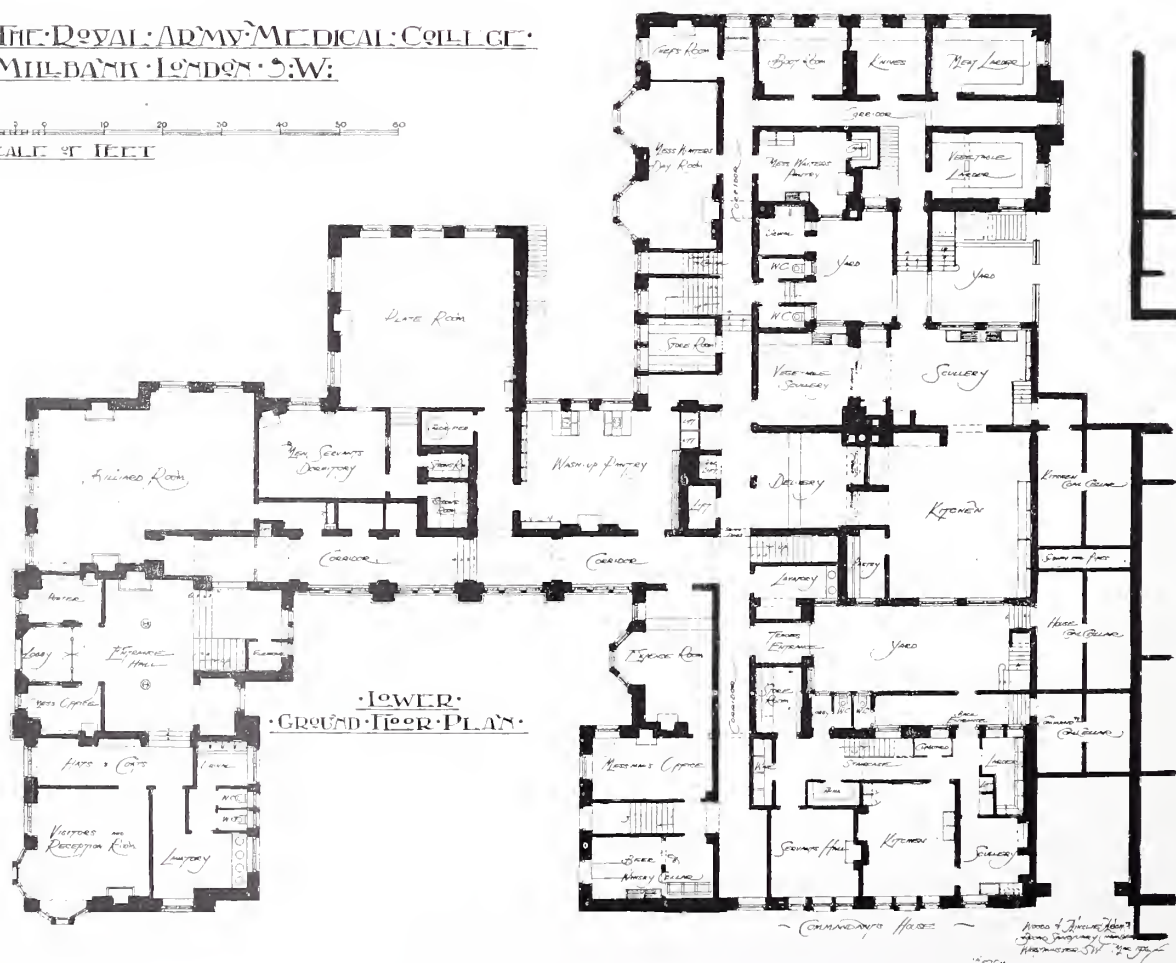
THE ROYAL ARMY MEDICAL COLLEGE  
MILBANK LONDON SW:

0 10 20 30 40 50 60  
SCALE OF FEET

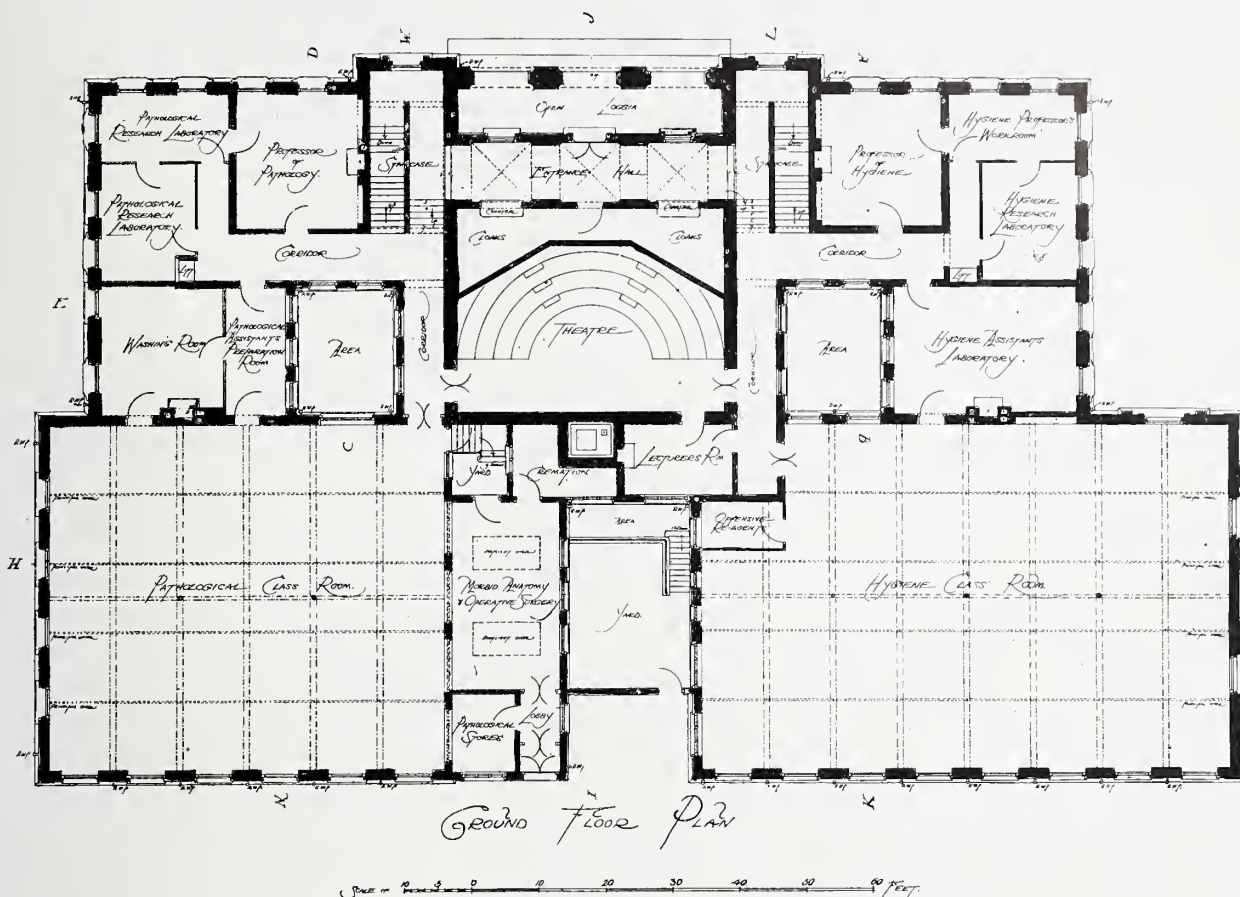


THE ROYAL ARMY MEDICAL COLLEGE  
MILBANK LONDON S.W.

SCALE OF FEET







THE LABORATORY BUILDING.

Portland throughout, except that for the heavy projecting cornice on southern block, which is in green Westmorland stone from the Kirkstone quarries of Arthur Jackson & Son, Ambleside. Facing bricks have been supplied by T. Lawrence & Son for the laboratory, and by J. H. Holden, of Cranleigh, for the college.

Whilst economy has been a consideration throughout, a certain amount of latitude has been possible in some of the principal rooms, the woodwork of mess-room, ante-room, library, and staircase being carried out entirely in English oak.

The hot-water supply and steam are provided from two 27 ft. boilers in basement of laboratory, and the engineering works have been carried out

by John Legg & Son, Swansea, under the superintendence of Kirkland and Capper, consulting engineers. The radiators used were manufactured and supplied by the National Radiator Co., and consist largely of their Astro swinging pattern.

We are indebted to the courtesy of Colonel James, the Commandant, for permission to take the accompanying photographs.

The cost of the buildings amounts, approximately, to £94,000, inclusive of laboratory and electric-light fittings; and the work generally has been executed by Ashby & Horner, Aldgate, E., in conjunction with the various sub-contractors, some of whose names are subjoined.

## ROYAL ARMY MEDICAL COLLEGE AND LABORATORY, LONDON.

WOODD & AINSLIE, Architects.

KIRKLAND & CAPPER, Consulting Engineers.

F. WALKER, Clerk of Works.

ASHBY & HORNER, General Contractors.

### SOME OF THE SUB-CONTRACTORS.

OTIS ELEVATOR CO.—Electric Lift.

T. LAWRENCE & SONS, Bracknell; J. H. HOLDEN, Cranleigh.—Facing Bricks.

JOHN LEGG & SON, Swansea.—Hot-water Engineering and "Ideal Radiators.

CASH & CO.—Electric Bells and Telephones.

OSLER & CO.—Electric Fittings.

LONGDEN & CO.; ROBBINS & CO., Dudley.—Grates.

JOHN HEYWOOD & CO., Manchester.—Laboratory Fittings.

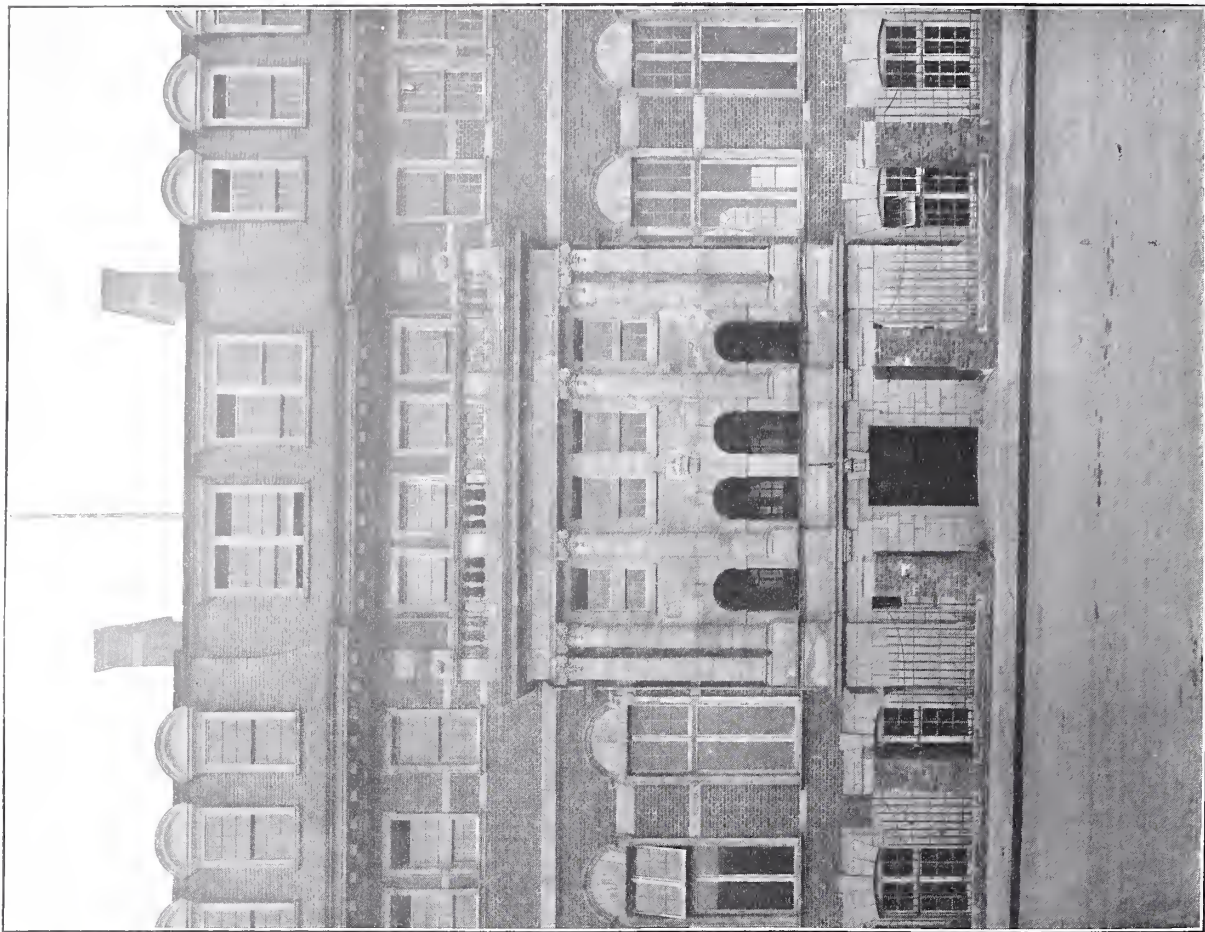
FRAZZI FIREPROOF CONSTRUCTION CO.—Fireproof Flooring.

FARMER & BRINLEY; J. WHITEHEAD & SONS.—Marble Work.

GILBERT SEALE.—Stone Carving.

JAMES GIBBONS.—Door Furniture, &c.





*Photos: Arch. Review Photo, Bureau.*

DETAIL OF FAÇADE ON GROSVENOR ROAD.



ENTRANCE TO THE COMMANDANT'S HOUSE IN ATTERBURY STREET





*Photo: Arch. Review Photo. Bureau.*

THE LABORATORY BUILDING.

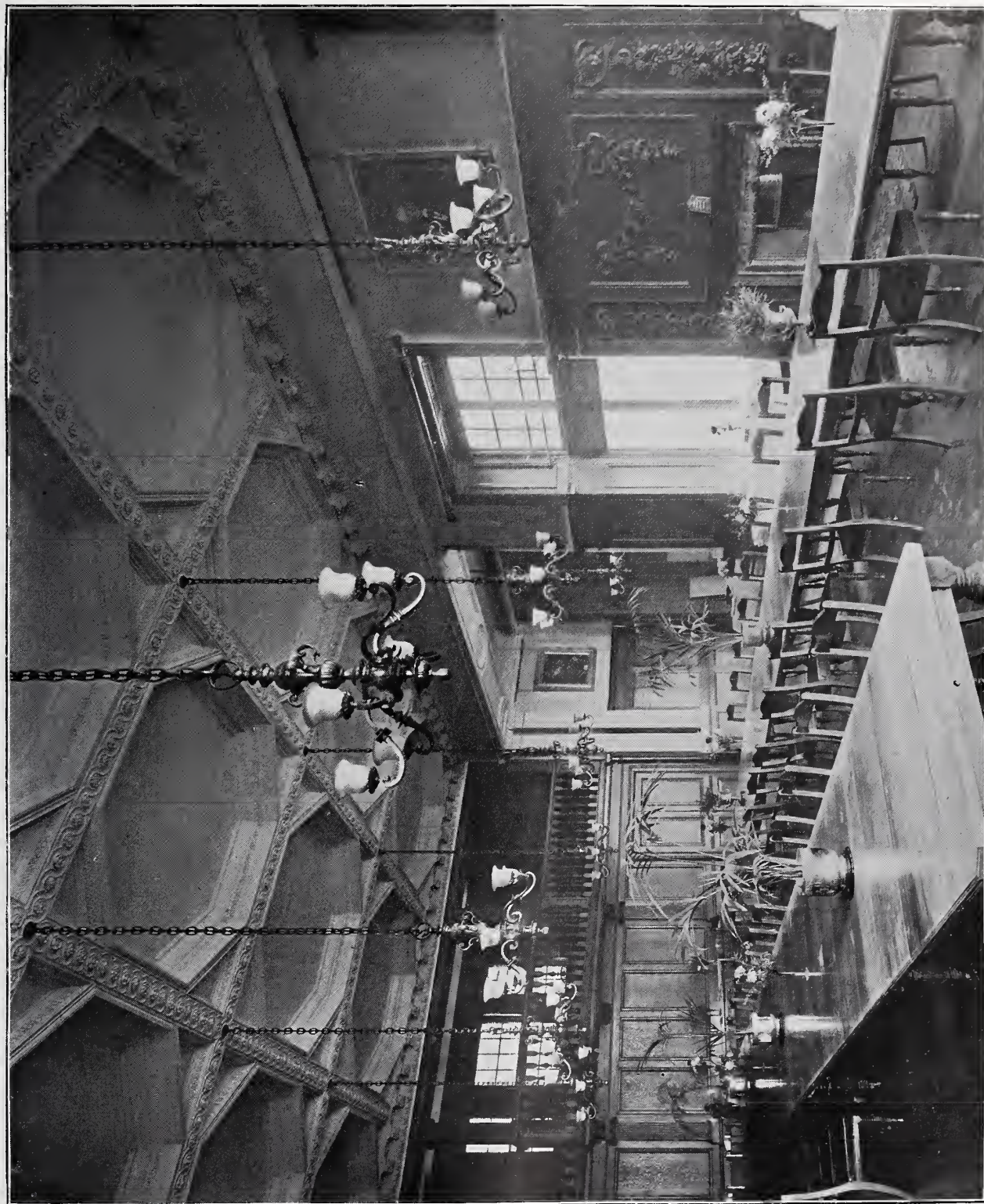




Photo : Arch. Review Photo. Bureau,

THE ENTRANCE HALL OF THE COLLEGE,





*Photo : Arch, Review Photo, Bureau.*

THE MESS-ROOM.



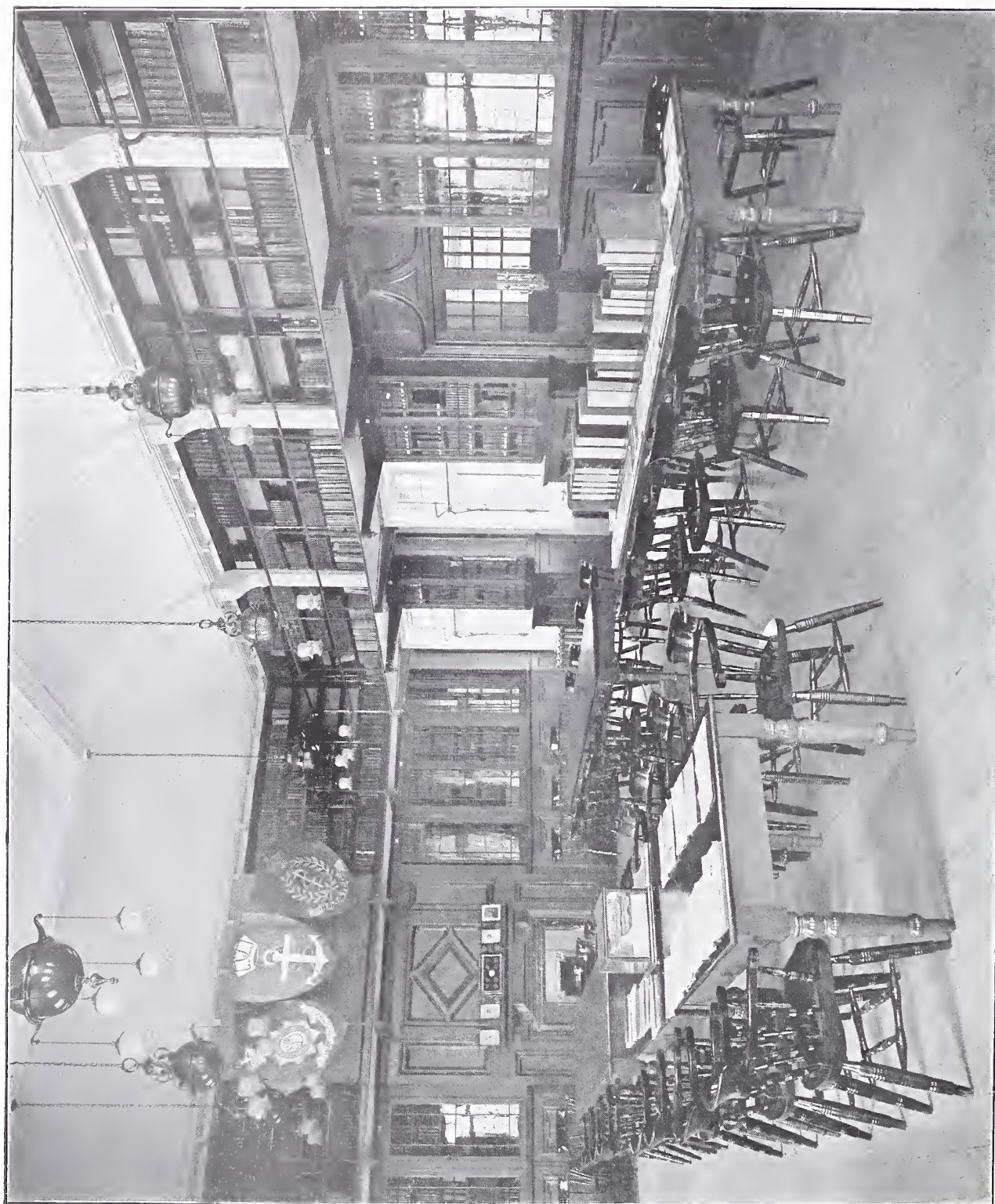


Photo : Arch. Review Photo. Bureau.

THE LIBRARY.





*Photo : Arch. Review Photo. Bureau.*

THE ANTE-ROOM.





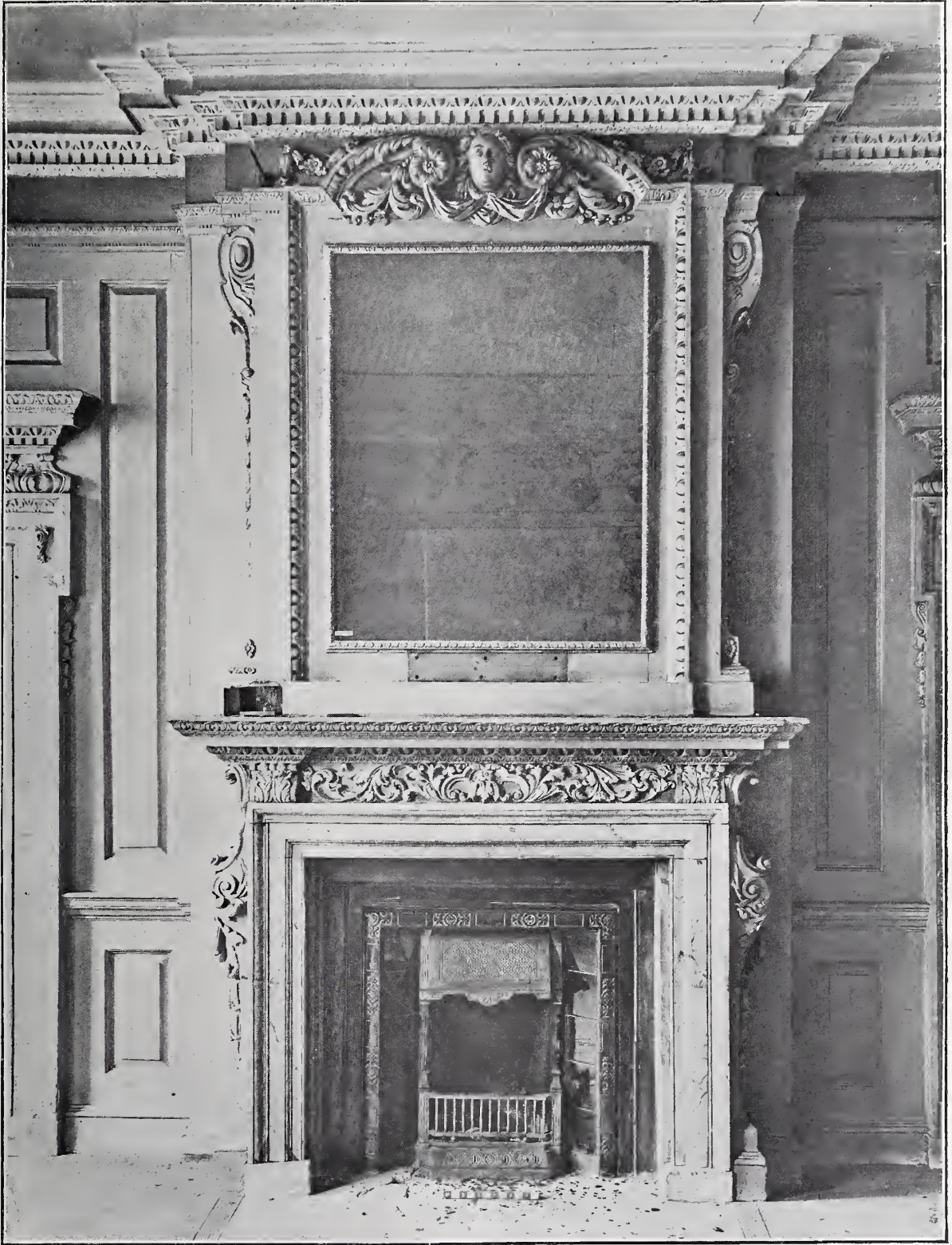
INTERIOR OF HYGIENE CLASS-ROOM.

Photo: Arch. Review Photo. Bureau.



# The Practical Exemplar of Architecture.

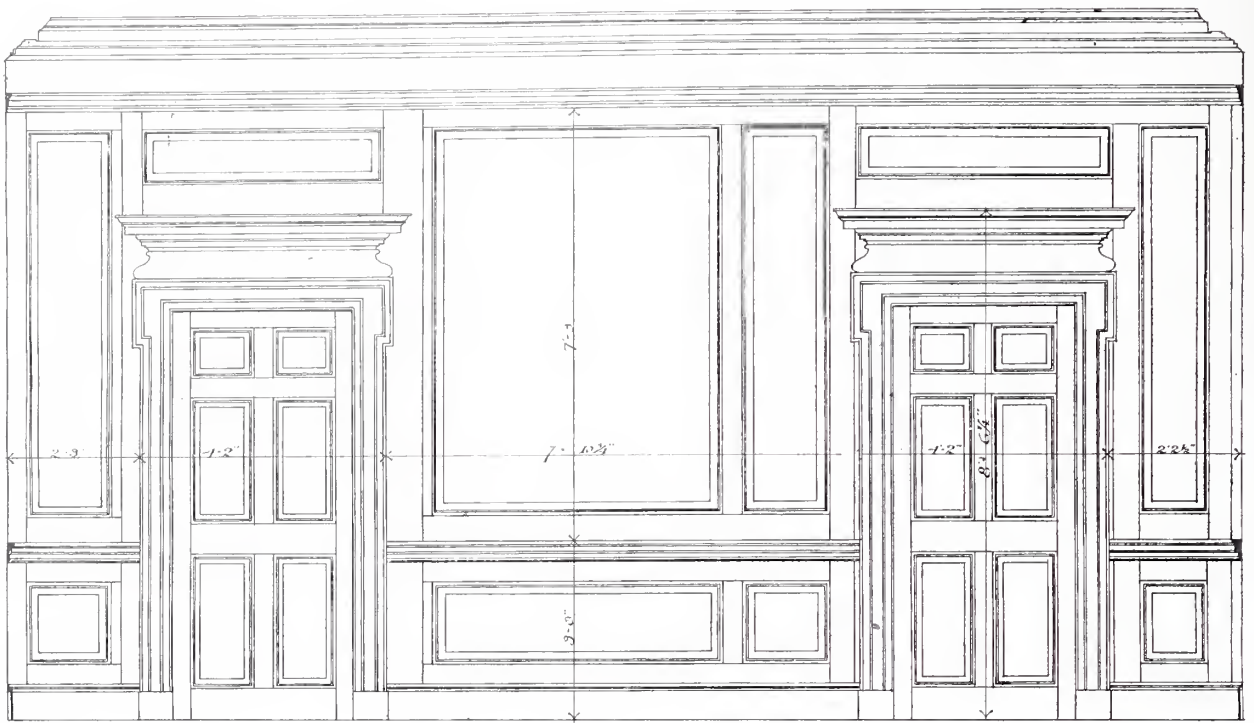
## XVIII.



*Board of Education.*

NO. 26, HATTON GARDEN, CITY OF LONDON.  
CHIMNEY-PIECE IN THE CAMBRIDGE WARD.



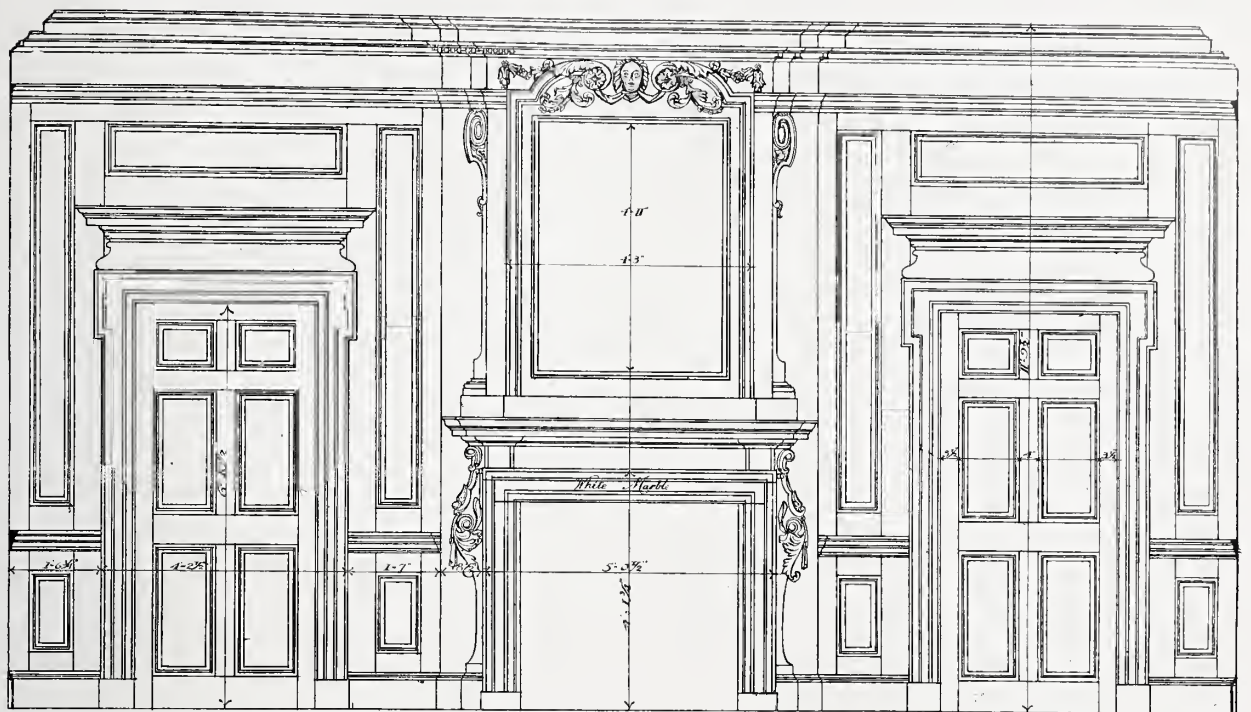


*Scale of Inches* 1 2 3 4 5 6 7 8 9 10 11 12 *Feet*

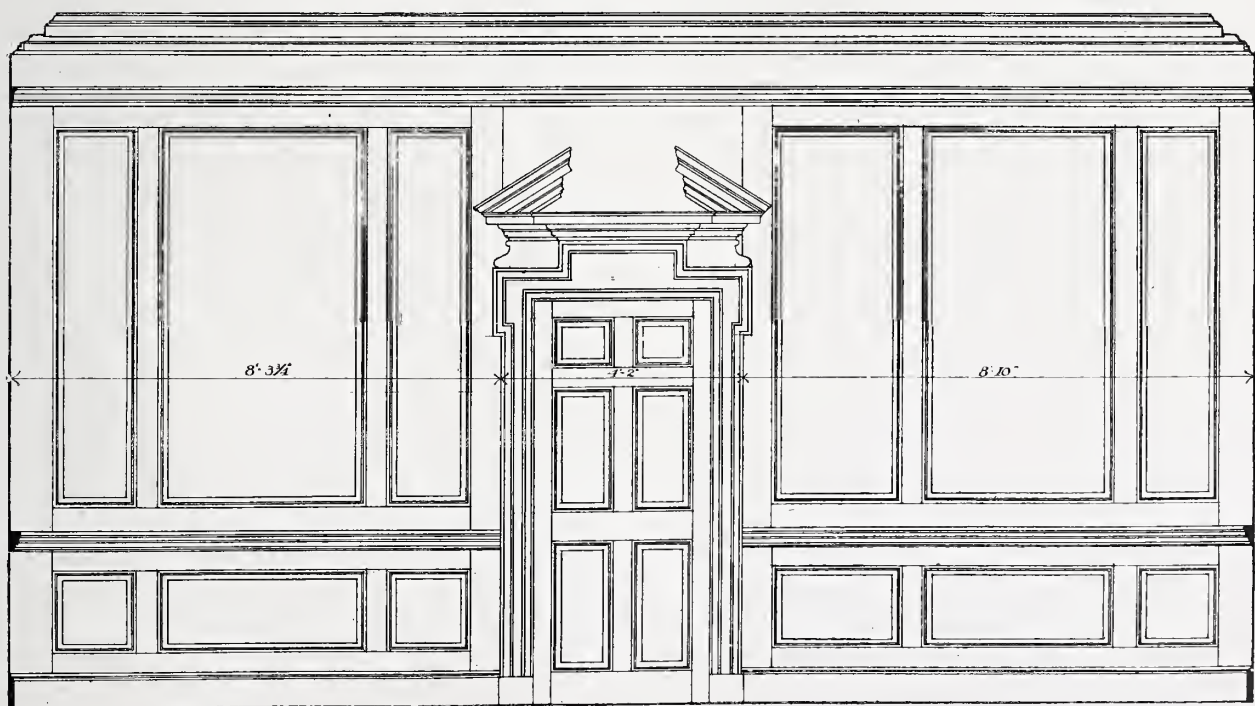


NO. 26, HATTON GARDEN, CITY OF LONDON.  
 PANELLING, ETC., IN THE CAMBRIDGE WARD.  
 MEASURED AND DRAWN BY J. M. W. HALLEY.





*Scale of Inches* *Feet*



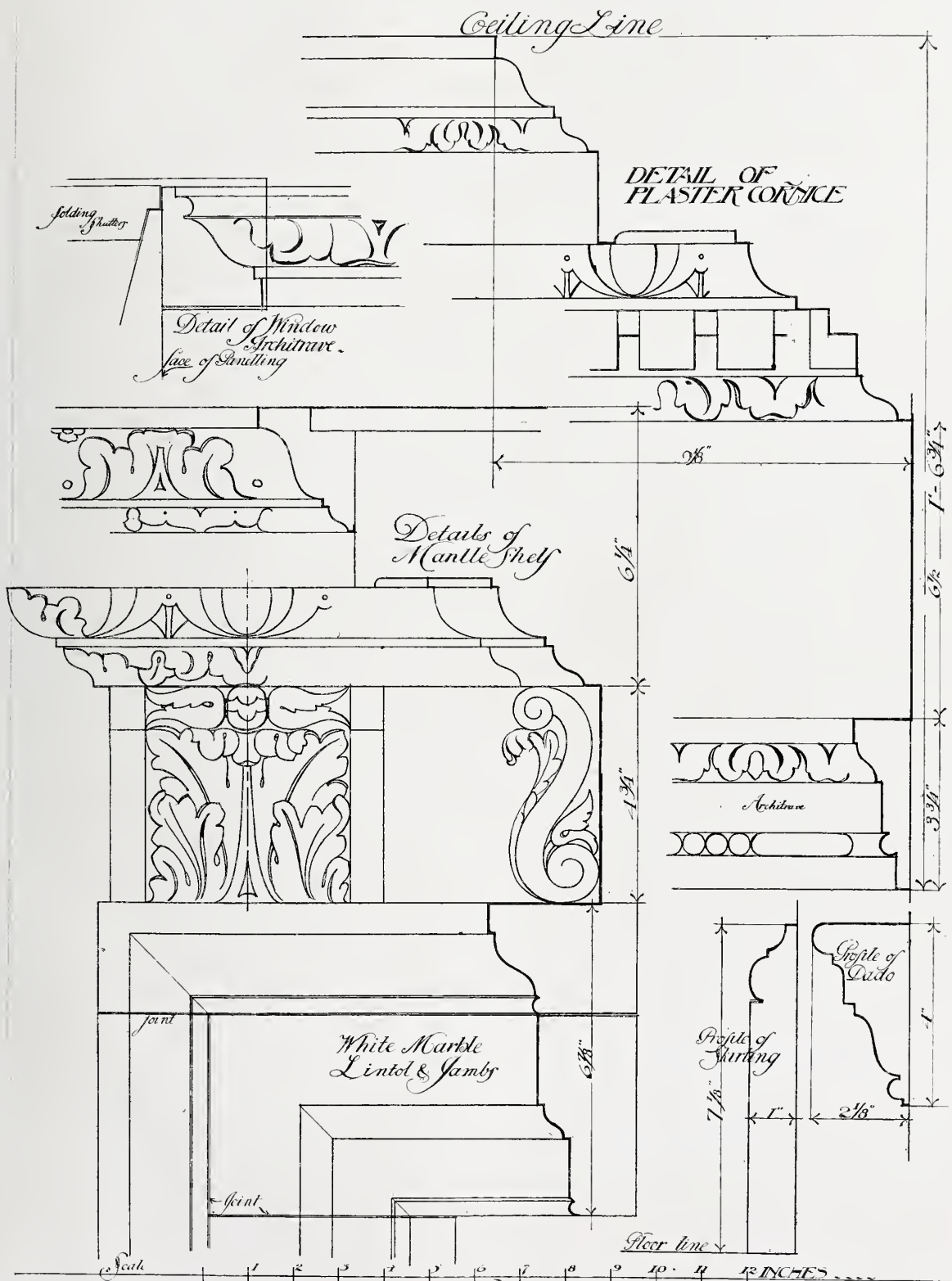




*Board of Education.*

NO. 26, HATTON GARDEN, CITY OF LONDON.  
DOORWAY IN THE CAMBRIDGE WARD.





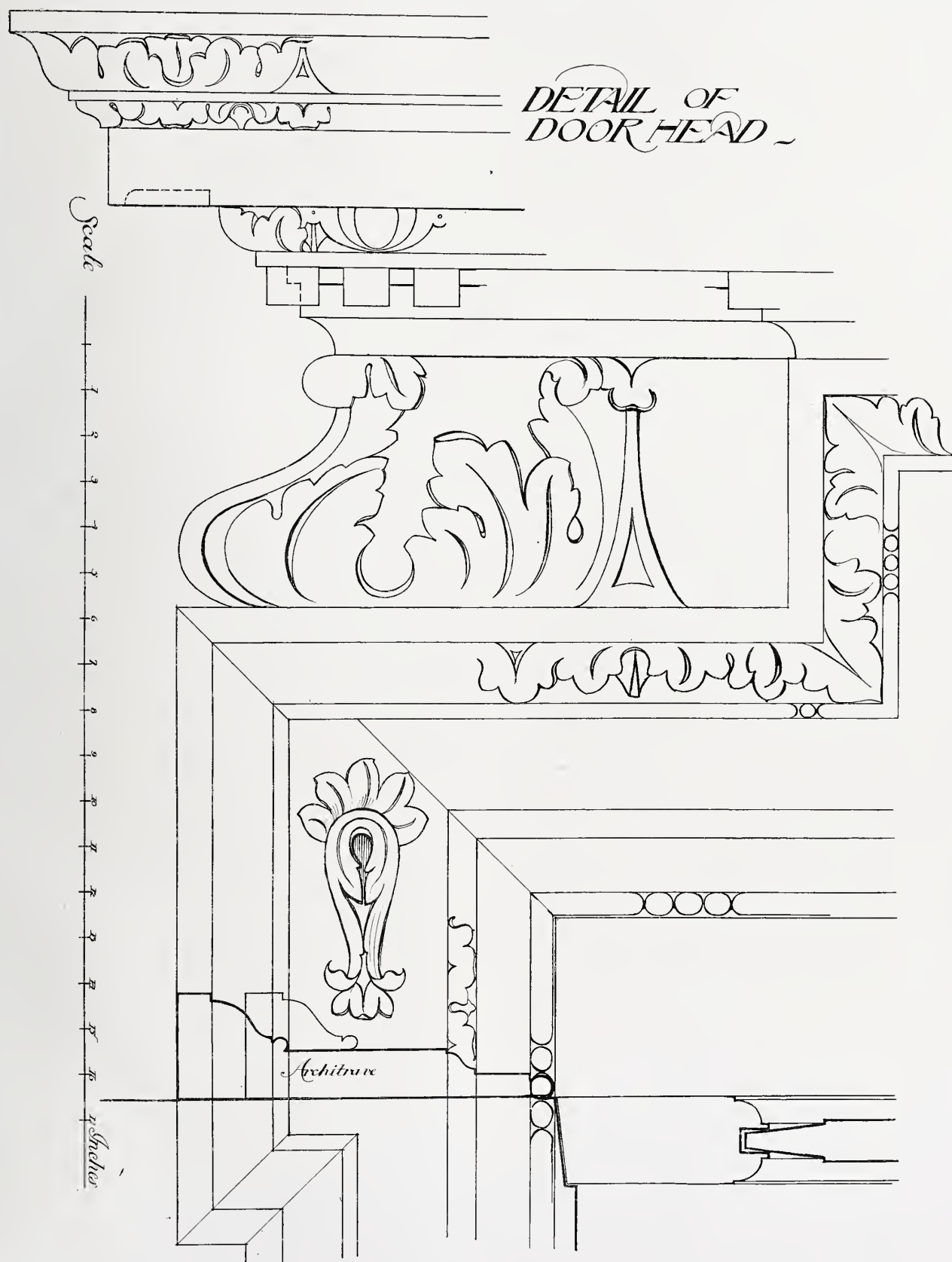




*Board of Education.*

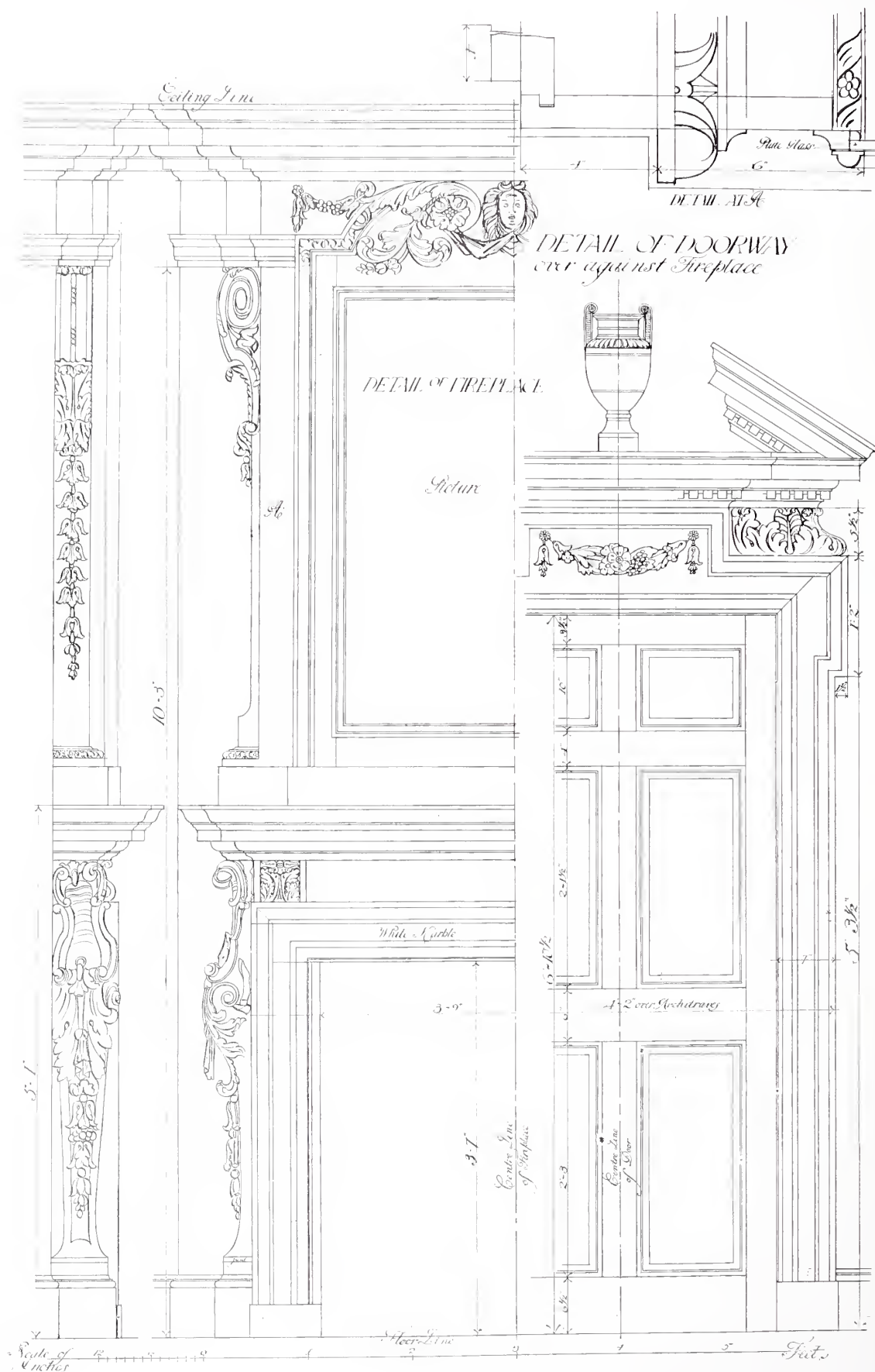
NO. 26, HATTON GARDEN, CITY OF LONDON.  
DOORWAY IN THE CAMBRIDGE WARD.





NO. 26, HATTON GARDEN, CITY OF LONDON.  
DOORWAY IN THE CAMBRIDGE WARD.  
MEASURED AND DRAWN BY J. M. W. HALLEY.





NO. 26, HATTON GARDEN, CITY OF LONDON.

THE CAMBRIDGE WARD: DETAILS OF CHIMNEY-PIECE AND DOOR.

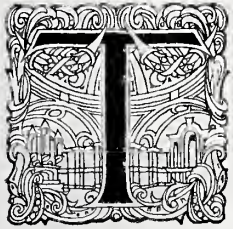
MEASURED AND DRAWN BY J. M. W. HALLEY.



# Books.

## FRANÇOIS-AUGUSTE RODIN.

*François-Auguste Rodin. By Frederick Lawton. With 24 illustrations. 2s. net. London: E. Grant Richards, Ltd., 7, Carlton Street, S.W.*



THE publication of a small and interesting handbook on François-Auguste Rodin, by Mr. Frederick Lawton, raises anew the question of the influences which have aided to form the majestic powers of this great sculptor. Now that Rodin has reached the apogee of his art, there are probably few people, if any, who would care openly to deny him the possession of a genius comparable only with the giants of the past. So much of his art is architectural in character, that its final tendencies (so far as we can estimate them) have peculiar interest in relation to the influences which are shaping architecture.

The early years of Rodin's career were employed in the carving of architectural ornament, and it must have taken all the vigour of his individuality to break through the rococo traditions which were the daily bread of such work. Quite early the force of the gothic spirit began to make itself felt. Despite the influence of study in Italy and the atmosphere of art in Paris, always so wedded to the spirit of the Renaissance, it steadily grew in power, until in later years we find Rodin writing comparisons between antique and gothic in which his summing up is altogether in favour of the latter. That his work itself shows an

increasing gothic purpose may be seen if it is considered in the light of his own words. That it is gothic in the sense of imitative mediævalism is of course the exact opposite of fact, but that it is gothic in the wider sense of subordinating beauty to truth, in a passionate pursuit of natural ideals, and in the striving to impart to his figures spiritual significance and force, is indisputable. If so much may be admitted we are facing an odd situation. We are familiar enough in England with the gothic intention, and the more or less competent gothic performance of minds stirred by an attempted return to mediævalism and by a love of the Church. In general, however, lay art, both in France and England, is altogether antagonistic to any spiritual *ethos*, and manifests itself by a vigorous pursuit of classical forms and ideals.

The astonishing fact about Rodin is the power of the gothic spirit untouched by anything like the attitude of the "ecclesiastically-minded layman." In him the classic and gothic ideals meet without clashing. It may perhaps be said that the gothic spirit is seen through classical forms, and triumphs over them. All historical art is a ready instrument in his hand. "The Burghers of Calais" monument is a magnificent example of this. Wholly gothic in intent, the pride of the clean-shaven bearer of the keys has all the stern characterisation of a Roman portrait of the third century.

All this leads us to wonder whether, if an architect of that supreme calibre which distinguishes Rodin as a sculptor and attached to the same ideals were to arise, the tide of the Neo-classic movement might be stayed, and "the orders" given a much-needed rest.

Even given the architect, the analogy of Rodin would probably apply. Despite his eminence (perhaps because of it) he has founded no school, and may indeed be regarded as a man born out of due time. It was different in days past. As Mr. Lawton says, "the Church was then a centre of artistic amalgamation, which we seek in vain to obtain to-day. The arts suffer by division and separation."

The failure of those influenced by Ruskin and the pre-Raphaelites to do more than impart to their time a vague sense of craftsmanship, is proof enough that the chaos of modern thought is destructive of any movement tending to artistic solidarity. A William Morris and a Rodin may come and go, but without some rallying point like the Church of the Middle Ages, our arts, like our philanthropies, will continue to grope.



"THE BURGHERS OF CALAIS."

From "François-Auguste Rodin," by F. Lawton.



## VASARI ON TECHNIQUE.

*Vasari on Technique: being the introduction to the three arts of design, Architecture, Sculpture, and Painting, prefixed to Vasari's "Lives of the Most Excellent Painters, Sculptors, and Architects." Now first translated into English by Louisa S. Macle hose. Edited with introduction and notes by Professor G. Baldwin Brown. 8½ in. by 6½ in. 328 pp., 30 illustrations. London: J. M. Dent & Co., 29, Bedford Street, Strand.*



WE offer a hearty welcome to this book, which, as its sub-title explains, is a translation of the three treatises on architecture, sculpture, and painting prefixed by Vasari to his *Vite*, with an introduction and exhaustive notes by Professor Baldwin Brown. It is not easy to over-estimate the value of the work, for Vasari describes the methods which were used in his own time, and speaks of them in a way only possible to one who has had practical knowledge of his subject. "As we read Vasari's descriptions and recipes," says the editor, "the air all about us seems full of the noise of the mason's hammer, the splash of plaster on the wall, the tinkle of the carver's chisel against the marble, the grating of the chaser's rasp upon the bronze."

Vasari had tried his hand at all three of the arts. He had been for a little while in the bottega of Michelangelo, and when that master was called away to Rome he had been placed with Andrea del Sarto. Later on he studied under Baccio Bandinelli, the carver of the Hercules and Cacus, which stands to this day under the Loggia de' Lanzi. He was thoroughly conversant with architecture and the building methods then in vogue; he had painted for the Medicean dukes, and in Rome in each of the several media; he had seen Guglielmo da Marsiglia making the stained-glass windows for the Duomo at Arezzo, and had even tried his hand at modelling in plaster. The editor of "Vasari on Technique" passes this latter phase of his work over in silence, and seems to consider that the treatise on sculpture shows a less intimate knowledge of his subject than the two others. Yet Benvenuto Cellini tells us that when he made his model for the statue of Neptune in competition with Giovanni da Bologna and others, Vasari personally assisted Bartolomeo Ammannato. He says that "the duke (Cosimo I de' Medici) came from the palace, with Giorgetto the painter, to Ammannato's apartment in order to view the statue of Neptune, upon which Giorgetto had worked several days with his own hands" (Cellini, "Autobiography," chap. xlv).

In the three treatises Vasari goes fully into the methods adopted by the craftsmen of his day. Under the heading of architecture he begins with

a description of the different marbles and other building stones then in use. These remarks are ably supplemented by the scholarly notes of the editor, who has collected such a mass of information on the subject as to leave very little for any future writer to add. We do not, however, consider his note upon "cipollino" and "cipollaccio" altogether satisfactory (p. 36). It is true that "the terminations '-accio' and '-ino' are dear to the Florentines," but there is all the world of difference between them. "Masolino" means "Little Tom" or "Tommy"; but "Masaccio" means "Hulking Tom," or even "Dirty Tom." Vasari, too, who hated Rome in his later days, speaks of her as "questa Romaccia," while he calls his wife, Niccolosa Bacci, by the affectionate diminutive of "La Cosina." We suggest that for some reason or other the "cipollaccio" was considered inferior to the "cipollino."

In his note on the slate called "pietra di Lavagna," found in the Riviera di Levante, the editor quotes Mr. Brindley as saying that it is "of poor quality and liable to bleach to a dirty ochre colour like that of brown paper" (p. 55). This stone, however, in days gone by was much used by the Genoese for the carved coat of arms which every nobleman thought it his duty to place over the entrance to his palace. Those which were left unspoiled by the political turmoils of the year 1797 show no indication of bleaching; the colour of them is a semi-lustrous black, and the arrises of the carved figures are as sharp and fresh as though they were cut but yesterday. There is a notice of the stone in Giustiniani's "Annali della Repubblica di Genova" written about the year 1534. "In this territory (near Chiavari) there is found a certain rock, or rather a vein of rare stone, which is to be met with in very few other places. This stone is very soft and easy to cut when first exposed to the sun and air, even like unto the cutting of a marrow or turnip. It is split with oaken wedges in the manner employed in Paris." He also tells us that it is "patient under the chisel (*paziente al scarpello*) even after the sun and air have had access thereunto." Although the remark is totally irrelevant, we cannot refrain from adding that Giustiniani describes the district as being so mountainous and broken that the very birds have difficulty in flying over it! This stone was used for some of the mantelpieces in the palace of Andrea D'Oria in Genoa.

Vasari's dislike for gothic architecture comes in for an interesting note. It should be borne in mind that he only voiced the sentiments of his time, without clearly distinguishing between the pointed style of northern countries and the work of the Lombards. All that was not "modern" was gothic. In a letter to Vincenzo Borghini,



dated from Milan (June 9th, 1566) he says that he has been to Pavia and "saw all the works of the Goths" (*tutte le cose de' Gotti*), referring clearly to the Lombardic work in San Michele. Cellini found the northern styles equally distasteful:—

"... architettura

Storpiata e guasta alle mani de' Tedeschi."<sup>1</sup>

Vasari's remark that the cost of a thousand pieces of gold-leaf, labour included, "was not more than the value of six scudi" (p. 248) seems to call for a more extended note than the editor has vouchsafed to us. It appears from a letter written by Vasari to the Cavalieri di Sto. Stefano at Pisa in 1570 that the cost of laying on gold-leaf was five scudi per thousand, and that owing to the intricacy of the decorations on the organ he feared that the workmen would strike for six scudi per thousand. In each case the price was for labour only, and does not seem to agree with the statement in the text.

It is impossible in a short review to mention all the good points which the book possesses, but we cannot turn from the editor's notes to the work of the translator without referring especially to the illuminating monograph on "Sculpture treated for position" (p. 180 et seq.). Professor Baldwin Brown has attacked the question in a way which should earn for him the thanks of all who are interested in the subject. The illustrations, too, form a valuable adjunct to the text.

And now to return to the translation. It is a pity that Miss Macle hose has chosen to frame her sentences so closely upon Vasari's model. Italian rendered literally into English does not give us literary English. "Ècci," for example, may, and does, mean "here is now"; but it is not English, and "there is" loses not one whit of the sense and is more euphonious. Then we read of stones whose colour "draws rather towards green." Vasari certainly uses the verb "trarre" (to draw), but the translation here should be "inclines or tends towards." "Leaves of paper" is not a happy expression; and "the first daub of rough stucco" scarcely betrays the presence of a technical mind in this literary partnership. Worse still is the description of the artist's first sketch for a picture. Vasari's words are, "sono fatti in forma di una macchia, ed accennati solamente da noi in una sola bozza del tutto," which is rendered into English by "they are made in the form of a blotch and are put down by us only as a rough draft of the whole." Quite true; "macchia" *does* mean a "blotch," but not in this instance. It clearly means a sketch diagram showing the general disposition of the features which the finished picture will

contain. We consider "with other tools that scrape" rather a puerile rendering of "con altri ferri che radono."

As an example of the not altogether satisfactory construction of the sentences the following, from p. 210, must suffice: "Hence springs the invention which groups figures in fours, sixes, tens, twenties, in such a manner as to represent battles and other great subjects of art. This invention demands an innate propriety springing out of harmony and obedience; thus if a figure moves to greet another, the figure saluted having to respond should not turn away."

After all, the blemishes are few, and they are insignificant in comparison with the general interest which "Vasari on Technique" will assuredly evoke.

## TWO NOTABLE GARDEN BOOKS.

*Italian Gardens; after drawings by George S. Elgood, R.I., with notes by the artist.* 14 in. by 10 in. pp. x, 158. 52 plates in colour. Price 42s. nett. London: Longmans, Green & Co., 39, Paternoster Row.

*The Garden Beautiful: Home Woods and Home Landscape.* By W. Robinson. 9 in. by 6 in. pp. xii, 176. 8 wood engravings. Price 7s. 6d. nett. London: John Murray, 50A, Albemarle Street, W.

THE lovers both of gardens and of exquisite painting are put into deeper debt to Mr. Elgood by this sumptuous volume, one plate of which we are enabled to reproduce by the courtesy of the publishers. Italy is the paradise of the garden architect, and beautiful as are the greatest of the English gardens, patriotism must give way to truth. For us there is always the supreme beauty of the English green in leaf and turf, but when the Italian architect is abroad and at his best comparison collapses. How happily and surely Mr. Elgood has fixed the colour of the sun-soaked stone must be sought in the book itself. In some of the plates the colours are a trifle low in tone, but doubtless they have lost a little in reproduction; in others there is a softness and haze that one associates rather with the atmosphere of English gardens such as Mr. Elgood has already revealed to us with intimate sympathy. In general, however, the pictures are beyond praise. In a few, such as that named "Azaleas," the artist lets go, and gives us a blaze of colour, relying simply on the flowers. In most the chief interest is in fountain or terrace, statue or gateway.

The arrangement of the book is geographical, under the headings of Roman, Florentine, &c. It is hard to believe that in Rome there can be such a garden as that of the Villa Colonna. Mr. Elgood has drawn no more beautiful picture than that of the oval platform "surrounded by statues of marble, toned and mellowed by age into delightful harmony with the great overhanging hedges of evergreen oak." One seems to be present at a meeting of the old gods, and waits to hear the pipes and Pan stamping in the thicket. La Vasca dell' Isolotto, Boboli Gardens, is a delightful example of clipped hedges, and the balustrade on which Flora and Pomona stand in the Villa Palmieri is a liberal education in garden architecture. In the forecourt of the monastery at La Badia is topiary work of a complexity which makes our efforts at Levens Hall and Heslington Hall look clumsy. At the Villa Arson is a terra-cotta Venus di Medici in a rococo niche or pale blue stucco, altogether as notable a contrast as may be imagined to the same statue in lead in a grey stone niche on the garden front of Rousham, chaste and indeed almost dour in the gardens which Kent laid out so well.

<sup>1</sup> Architecture maimed and spoilt in German hands.



Mr. Elgood's notes are full of knowledge, and he tells the history of the historic gardens with a simplicity and tenderness for his subject which matches well the beauty of his drawing. We can wish a garden lover no better fortune than to possess this book.

It is probable that the final battle between the prophets of the "formal" garden and the "natural" garden is some way off, but in any such Armageddon Mr. W. Robinson will be a doughty performer. We remember the desire of the gentle revolutionary to see the last king strangled in the bowels of the last priest. Mr. Robinson's page is so scorched with the fervours of controversy that we grow nervous for the safety of the authors of "frivolities of paper plans," and of the writers who do not "take the trouble to grasp the simplest elements of what they write about." Mr. Robinson loves "natural" gardens and hates formal gardens. In the course of his argument he adopts the simple but not too ingenuous method of building up a bogey and then hitting it manfully. "*It is only (the italics are the author's) where the plants of a garden are rigidly set out in geometrical design, as in carpet gardening and bedding-out, that the term 'formal garden' is rightly applied.*"

He then proceeds to associate architects with this type of garden. Of course, if Mr. Robinson chooses to narrow the art of the formal gardener and the garden architect to carpet gardening, and to instance, as he does, the Crystal Palace and Chatsworth as examples of what fountain schemes do for a formal garden, he can easily prove his case, and is justified in any violence of language. Surely, however, this is a grotesque perversion of what is ordinarily understood by the words. Stated shortly, the idea of formal gardening is to avoid imitations of Nature which may result only in parody, and to bring the garden into relation with the house by laying it out on a definite design.

Our author seems to think that architects and others who have made a study of garden design think only on paper, and neither know nor care anything about the earth and its flowers, shrubs, and trees.

As Mr. Mawson's "Art and Craft of Garden Making" is gibbeted by unfavourable quotation, we may assume that Mr. Mawson is also among the men of Belial; but surely he has long since won his spurs as a practical gardener as well as a designer. Mr. Robinson is a lover of good tree-planting, and writes about it with the rare sympathy and insight that comes of vast knowledge and experience. We quite agree that the question, "Take away all tree-planting and good gardening from our Castle Ashbys, Longleats, or Wiltons, and what do we gain?" admits of no answer favourable to such a ridiculous course. But who has suggested such a removal? Certainly no lover of formal gardens. Rhetorical questions of this sort merely darken counsel. When Mr. Robinson says that "the painted gravel gardens of Nesfield and Barry and other broken-brick gardeners were also attempts to get rid of the flowers and get rigid formality instead," he simply says the thing that is not. Eden Nesfield will be remembered when Capability Brown is merely a cause of mocking. Perhaps, however, we take Mr. Robinson's philippics too seriously. He has a literary style of a delightful and pungent sort, and when thus equipped it is a great temptation to follow the traditional Irish advice, "When you see a head hit it." The true purpose of the book, apart from its controversial side, is to sing the praises of woodland, and this is done convincingly and without any attempt at the tiresomely lyrical. We agree that "the whole system of dotting trees on grass is a wrong one," but it is only given to the few to take to the woods in ideal Robinson fashion. For those who can, this book is an admirable guide, and even for less ambitious schemes than the creation of a wood the information as to the types of trees suitable for different soils, climates, and aspects

is infinitely valuable, and can be found nowhere else so well set out. Whether one gardens formally or otherwise or not, it is a book to be read.

The ordinary garden lover without several acres for woodland will doubtless continue to regard the true formal garden as the best treatment for limited spaces, and will continue to think such formal gardens as those of Melbourne and Studley the more beautiful for their woodland background, but altogether beautiful in themselves.

We congratulate the publisher on the brilliant wood engravings. They are a refreshing change from the usual half-tone block, and we assume they are engraved from photographs, as no artist's name appears on the title-page.

#### THE PRE-RAPHAELITES.—REMBRANDT.

*The Pre-Raphaelite Brotherhood: a critical monograph.* By Ford Madox Hueffer. 6 in. by 4 in. pp. xii, 174. 38 Illustrations. 2s. nett.

*Rembrandt: a study of his life and work.* By G. Baldwin Brown, M.A. 8 in. by 5½ in. pp. xii, 341. 48 Illustrations. 7s. 6d. nett.

London: Duckworth & Co., 3, Henrietta Street, Covent Garden.

FOR the books on matters artistic which issue from the house of Duckworth there is always a welcome. They are books with an idea, by writers who have something definite to say and the capacity for saying it. It is part of the pleasant cynicism of coincidence that books on Rembrandt and on the Pre-Raphaelites should issue simultaneously from the same press. When Holman Hunt and Dante Gabriel Rossetti went on a tour in Belgium they found nothing (as Mr. Hueffer reminds us) to say of the work of all painters, from Rubens to Rembrandt, but "filthy slosh."

Mr. Hueffer's book has the admirable purpose of defining the *personnel*, aims, and achievements of the Pre-Raphaelites. The word is generally used altogether too loosely, and neither Ford Madox Brown nor Sir Edward Burne-Jones were of the Brotherhood, which included seven only, of whom four hardly count. Holman Hunt and Millais were the true founders; Millais soon fell away from grace, and D. G. Rossetti drifted into æstheticism, an attitude far removed from Pre-Raphaelism as Holman Hunt understood and still understands it. It is a curious commentary on the genesis of far-reaching movements that this revolt from a muddy technique and muddier artistic outlook, though it changed the face of modern art, began by Millais's supreme facility in the manner of Etty and his like, and Hunt's equally marked incapacity to emulate such academic achievements. Millais had exhausted and was wearied by the Etty possibilities; Hunt did not begin to reach them.

Mr. Hueffer puts the main Pre-Raphaelite idea very clearly when he says that in 1848 the voice of the Brethren spoke in favour of the life that is around us—in favour of Character as opposed to Type.

Turning to Mr. Baldwin Brown's study of Rembrandt, we are struck by the excellence of his arrangement and division of chapters. The book is well made, a virtue the absence of which in so many publications is not atoned by much brilliant writing. The author sees his subject whole, and writes with an enthusiasm none the less inspiring because it is tempered by sound critical judgment. The drawings, etchings, and paintings are dealt with in their just proportions, and one may therefore get a clearer idea of the master's range and power than is possible from other more monumental works, such as that of Dr. Bode, which deals only with the paintings.

The section dealing with the etchings is perhaps particularly valuable, as it deals generally with the methods of etching, dry-point and graver, and helps to a clearer understanding of the technique.

The character of Rembrandt, his marriage with Saskia, his irregular unions with Geertgen and Hendrickje, his relation-





VILLA ALDOBRANDINI: FOUNTAIN IN THE PARTERRE.

From "Italian Gardens," by George S. Elgood, R.I. By the courtesy of Messrs. Longmans, Green & Co.







ship with his son Titus, and the financial disasters of his later life, are sketched for us clearly and sympathetically. There is no superfluous detail and no gossip, but enough of fact to create for us the atmosphere which influenced the painter, though indeed it seems clear that the burden of care did little to confuse that inner life which Rembrandt lived with his art.

To minds accustomed to associate the word "impressionism" with the work of Whistler and of the wilder sort of French moderns, "impressionist" will seem a queer label for Rembrandt, but Professor Baldwin Brown points out that in the development of his art in his later period he shed the exact delineation of robe and armour, and brought to his subjects a broad and summary handling which is the foundation of modern impressionism.

The sacred pictures, and particularly those in which Our Lord is the central figure, are described with a sympathy of criticism which is refreshing after the aloofness from subject affected by some critics, who can find nothing in the Divine Figure to discuss except a flesh tint.

To the analysis of methods of lighting, to the skilful use of architecture in landscape, to Rembrandt's uncertainty in portraiture, and to the psychology of his art, we can do no more than refer. The book is admirably illustrated, and regarded merely as a *catalogue raisonné* is of great value. It is, however, much more; and few books fall to a reviewer's lot which he can read through with such pleasure and commend with such sincerity.

#### ENAMELLING.

*Enamelling: a comparative account of the development and practice of the art.* By Lewis F. Day. 8½ in. by 5½ in. pp. xv, 222. 115 Illustrations. 7s. 6d. nett. London: B. T. Batsford, 94, High Holborn.

A BOOK on enamelling comes almost naturally from Mr. Lewis Day's pen after his useful and comprehensive book on windows, for the general principles that govern the two arts are closely allied, and indeed the earliest enamellers were almost certainly glass-workers first. The connexion is, of course, most marked in cloisonné enamel, where the cloisons serve the same decorative purposes as the leads of a window.

Mr. Day, in his usual painstaking fashion, deals in detail with the early history and shows the gradual development of the art. On the subject of Byzantine enamel we are not sure of Mr. Day's accuracy. He gives the earliest of this work as being of the sixth century, but the most recent authorities, while admitting literary evidence for enamel as early as Justinian's time, are not inclined to date any example earlier than the eighth century. He also says, "It is all in gold, usually cloisonné," forgetful of the circular copper medallion, with copper cloisons, and enamelled on both sides with pictures of St. Theodore Tyron and St. George, to which Mr. O. M. Dalton last year drew attention.

Mr. Day has done well in trying to dethrone the fetish of Limoges. It is generally held that a Limoges enamel of the thirteenth century must be, *ipso facto*, a beautiful work. Limoges was the Birmingham of the Middle Ages in the matter of jewellery, and everything made there needs to be judged on its own merits. It later embraced pictorial enamel with amazing success, and Mr. Day wisely suggests that the term "Limoges" is better reserved for this painted work.

The modern craze for enamelling has produced a mass of crude work, and it is to be hoped that some of the imperfectly trained enthusiasts will learn from Mr. Day's book that it is an art very exacting if properly practised, and that good craftsmanship is of the essence of success. The book is admirably illustrated, but we trust that when a new edition is required Mr. Batsford may see his way to add some coloured plates. There are many "colour books" published these days which seem to have no justification, but here is a subject which calls urgently for colour reproduction.

#### "BURLINGTON" ART MINIATURES.

*"Burlington" Art Miniatures. Reproductions of famous pictures from the Great Galleries, &c. No. 1, H.M. the King's Collection. In card box 4½ in. by 6½ in. 1s. 6d. nett. London: The Fine Arts Publishing Co., Ltd., 2, Cheapside, E.C.*

THE reproduction of the world's masterpieces in painting proceeds apace; and recent years have seen an almost endless succession of books, portfolios, and prints devoted to this object. With the exception of the Mortimer Menpes series it cannot be said that the colour reproductions have been uniformly successful, and the publishers of the present series have wisely restricted their efforts to reproductions by the mezzogravure process. In all twenty of these cases will be issued, appearing at fortnightly intervals, and subscribers to the whole series will receive, free of cost, a cabinet to contain it. From the King's collection we have ten pictures: the portrait of the present King and the Duke of Connaught at an Aldershot Review, by Detaille; Napoleon at Fontainebleau (Delaroche); Derick Boru (Holbein); Charles I on Horseback (Van Dyck); Sir Walter Scott (Lawrence); the famous La Rixe of Meissonier; portrait group of the Three Eldest Daughters of George III (Gainsborough); the Jewish Rabbi of Rembrandt; the portrait of Rubens by himself; and the Baptismal Font (Landseer). The reproductions are excellently done, and within the printed limits of 3½ in. by 4½ in. could not well be bettered; the gradations of tone and the softness of the high lights are particularly noticeable. The selection is, we presume, based more or less on popular lines, and the series, which will cover all the important galleries of Europe, should prove useful both to the student and the layman.

#### THE HOUSE BEAUTIFUL AND USEFUL.

*The House Beautiful and Useful: being practical suggestions on furnishing and decoration.* By J. H. Elder-Duncan. pp. vi, 224. Very fully illustrated. 11 in. by 9 in. 5s. nett. London: Cassell & Co., Ltd., La Belle Sauvage, Ludgate Hill.

THE success of Mr. Elder-Duncan's earlier volume on Country Cottages and Week-end Homes, uniform with this, has prompted the preparation of a similar book on furnishing and decoration. It is primarily intended for the general public, but will be none the less useful to those whose work runs in these directions. In an introductory chapter the decorative achievements of last century are dealt with clearly and pleasantly, and the author tilts merrily at the now discredited but not yet wholly damned vagaries of "L'Art Nouveau."

On the subject of "Antique" furniture Mr. Elder-Duncan discourses very sanely:—

"For those who desire old furniture, it is only sound advice to say, never worry about the maker. Satisfy yourself that the piece is really old (and this is difficult enough in all conscience!); satisfy yourself that it is really beautiful; see if its beauty plus utility is sufficient recompense for the price you are called upon to pay for it, and if so, buy it. All else is chimera and supposition."

A very good test of whether a particular piece is reasonable in price is a mental calculation of what it would cost if new. If it would be no more than is asked, it is a safe purchase. It is absurd to suppose that even one per cent. of the "Chippendale" furniture that is on sale ever saw his workshops. Some ingenious soul with statistical leanings has calculated that if all the reputed Chippendale chairs were truly attributed, Chippendale would have needed to turn out one chair every three and a half minutes during his whole life. The chapters on modern furniture, carpets, surface decoration, &c., are informed by good taste and reasonable advice. Were it not that Mr. Elder-Duncan is Editorial Secretary of this REVIEW, we should write with fuller praise; but, after all, "good wine needs no bush," and we can at least wish this popularly conceived handbook all the success it deserves.

LAWRENCE WEAVER.







monumental work on the Alhambra, with numerous colour-plates and diagrams of its extraordinary decorative designs. We should like to see some measured details of the exquisite iron balustrading in gates, &c., which show but dimly in the photographs.

### THE BRITISH HOMES SERIES.

*Flats, Urban Houses, and Cottage Homes. Edited by W. Shaw Sparrow. 11½ in. by 8½ in. pp. 160, 19 colour plates, and many illustrations from photographs, plans, &c. 5s. nett. London: Hodder & Stoughton, Warwick Square, E.C.*

THIS the third volume in the "British Homes Series" maintains the level of its predecessors. One is getting a little tired of large publications with rather indiscriminate pictures of week-end cottages, but the flats here illustrated are well-chosen examples of a type of architecture peculiarly modern, which has proposed for solution new and difficult problems. Very interesting are the plans of the palatial flats for millionaires—Gloucester House, Piccadilly—by Mr. Colcutt and Mr. Hamp; they are surely the last word in luxury. Mr. Norman Shaw's delightful building at the bottom of St. James's Street provides another welcome photograph, as also his Albert Hall Mansions with their interesting mezzanine plan. Mr. Frank T. Verity contributes some introductory notes on the design of Flats-de-luxe, and the *luxe* impresses him so greatly that the tenant is promoted to the title of "Châtelaine" of the flat. *Toujours la politesse*. Two of Mr. Verity's Baronial Blocks are illustrated, 12 Hyde Park Place and Cleveland Row, St. James's. The latter is by far the more successful.

Mr. Reginald Mophew's interesting if rather foreign-looking building in Jermyn Street is shown in a colour-plate of delightful tone, as are also Mr. Paul Hoffmann's great blocks at Gloucester Road and Hanover Square, for what reason is not so apparent.

Mr. F. S. Chesterton's and Mr. J. D. Coleridge's very fine Horton Court, Kensington, is represented by a very cramped general photograph, and deserved better illustration. The view of the roof-garden over the shops, however, gives a good idea of that admirable feature.

Other excellent designs are illustrated from the work of Professor Pite, Messrs. Read and Macdonald, and Mr. Walter Cave. Mr. Edwin T. Hall contributes a chapter on the planning of flats in Paris and Vienna, and draws some interesting comparisons. In the section devoted to Urban Houses and Cottage Homes, Mr. Gerald Horsley discourses on things in general, urging simplicity in decoration, &c. The town houses by Mr. Arnold Mitchell, Mr. E. P. Warren, and others, are well illustrated, and it is pleasant to meet them again.

Mr. Horace Field's charming London Office of the North-Eastern Railway hardly seems to come within the category of a British Home of to-day, but it is a refined and scholarly work inside and out, and pleasant on the page of any book. Amongst urban houses in the provinces, Mr. Walter Brierley's Bishops barns, York, is altogether successful. There are several admirable country houses, including Mr. E. P. Warren's own residence at Cholsey, Berks (architects' own houses always raise one's curiosity), which has been illustrated in our pages; and it is an invariable pleasure to see Mr. Lutyens's work, in this case represented by Heathcote, Ilkley—a very sober building with pyramidal outlines. We think it would have been better to keep the volume entirely to urban buildings and thus avoid a certain apparent confusion of purpose.

However, it is a book worth getting and keeping, and, need we say, a notable five-shillingworth.

### FLORENCE AND NORTHERN TUSCANY.

*Florence and the Cities of Northern Tuscany. By Edward Hutton. With sixteen illustrations in colour by William Parkinson, and sixteen other illustrations. 7¼ in. by 5 in. pp. viii, 428. 6s. London: Methuen & Co., 36, Essex Street, Strand.*

TO realise how vast is the amount of knowledge an architect ought to possess one has only to take up such a book as Mr. Hutton's "Florence and Northern Tuscany." The author is clearly not an architect, nor is his latest work an architectural one; and yet he has given us a book from which we may all learn something we did not know about architecture. In our own particular text-books we are accustomed to see the masters of the Renaissance flit across the scene like a team of cricketers going out in steady succession to add their little to the total score, and without one single touch of humanity which would make us feel that while they worked they were living and thinking men like unto ourselves. In Mr. Hutton's pages we see Niccolò Pisano wandering among the classic fragments which lay in the Campo Santo "with the faint memory of Rome that lingered like a ghost in the minds of men," and preparing to reveal his powers in the pulpits of the Baptistery and of Siena. He shows us again in vivid words that historic contest between Ghiberti and Brunellesco, though we cannot agree that "Ghiberti, with the real instinct of the sculptor, has altogether outstripped Brunellesco." Indeed, Mr. Hutton himself at a later page, having possibly forgotten what he has already said, as he stands before the two panels in the Bargello,<sup>1</sup> seems to give the greater meed to Brunellesco. "How swiftly the angel has seized the hand of Abraham; how splendidly he stands, the old man who is about to kill his only son for the love of God. And then consider the beauty of Isaac, that naked body which in Brunellesco's hands is splendid with life. . . ." Surely it was no easy question that the judges were called upon to decide?

When Mr. Hutton comes to speak of Sta. Croce he does an injustice to Giorgio Vasari, "that divine gossip," as he calls him. "Even before the sixteenth century," he says, "it had been here that Florence had set up the banners of those she delighted to honour. And though Cosimo I. destroyed them when he let Vasari so unfortunately have his way with the church, some remembrance of the glory that of old hung about her seems to have lingered, for here Michelangelo was buried." But we may believe that Vasari himself regretted the destruction which his own hands had wrought; for in his own life, while he tells us that he had to remove the screen from Sta. Maria Novella and build a new choir behind the high altar, he adds that *gli toglieva tutta la sua bellezza*—it took away all its beauty<sup>2</sup>; and we may justly presume that he felt the same when he was called upon to design the alterations in Sta. Croce.

We are glad to note that while speaking of the palaces in Genoa the author is careful to emphasize the fact that Galeazzo Alessi, who designed most of them, was a Perugian, and that consequently Genoa owes her name of "La Superba" to an accident. He founded no school, and the Genoese themselves seem to have been totally devoid of architectural talent. We trust, by the way, that readers of this book will not be misled into visiting the Palazzo dell' Università for the purpose of seeing "the tomb of Sinone Boccanegra, the great Doge." The tomb was swept away with the church in which it stood—San Francesco di Castelletto—and the slab with his

<sup>1</sup> It is unnecessary to remind our readers that excellent casts of these two reliefs are to be seen side by side in the Victoria and Albert Museum, South Kensington.

<sup>2</sup> Vite, &c., Florentine Edition, 1878-85, Vol. VII., p. 710.



effigy is now preserved in the Palazzo Bianco, which occupies one portion of the site of the church.

Taking the book as a whole, it is one which we most heartily recommend to all who follow the three sisters—Architecture, Painting, and Sculpture. It might be improved by a more detailed index, but the coloured illustrations by Mr. Parkinson, and the not less beautiful word-pictures which the author has given us, go to make up a book which should form a welcome addition to an architect's library.

### GLEANINGS AFTER TIME.

*Gleanings after Time: Chapters in Social and Domestic History. Edited by G. L. Apperson. I.S.O. 9 in. by 6 in. pp. ix, 239. 29 illustrations. 6s. nett. London: Elliot Stock, 62, Paternoster Row.*

It was a happy thought to dig out of the earlier numbers of *The Antiquary* these nineteen essays on bygone ways and things. The amount of learning that gets snowed up year after year in the back numbers of periodical literature is melancholy to think on. The republication of the more important of such essays, after time has tested their worth, is a useful work of both editor and publisher. Of the nineteen chapters two have an architectural interest, "The Old Tabard Inn," by W. C. Miller, and "The History and Development of the House," by H. B. Wheatley, F.S.A. The former deals pleasantly with the hostelry immortalised in "The Canterbury Tales." It is astonishing that no public effort was made to save it when twenty-six years ago the house-breaker swept away with the Tabard some of the ripest and most intimate associations of English literature.

Mr. Wheatley, so well and honourably known for his illuminating editions of Pepys and Evelyn, and for his topographical researches, is a little disappointing on this subject. The uses of different rooms are fully described, but the outline of the development of arrangement would be more intelligible if some plans were shown. The general public is quite able to understand simple plans, and it is unfortunate that lay writers on architectural subjects do not seem to grasp this. The other seventeen essays are of considerable interest, but do not call for special remark in these pages.

### COLOUR PHOTOGRAPHY.

*Photography with "Autochrome" plates. By George E. Brown, Editor British Journal of Photography, and C. Welborne Piper. pp. 16. 2d. London: Houghton's Ltd., 88, 89 High Holborn*

THE latest, and perhaps the greatest, revolution which has taken place in photography—namely, the manufacture of a plate sensitive to all colours, and rendering in the "positive" state the natural colours of the object photographed—is due to M. M. Lumière of Lyons.

For work requiring a plate not larger than  $8\frac{1}{2}$  in. by  $6\frac{1}{2}$  in. nothing can be finer; but *all the instructions* as to the various manipulations of the plate must be carried out. The result so obtained cannot, unfortunately, be repeated, except by copying the same in the camera, or another exposure made on the original subject. At present each plate is finality. The old adage about "exposing for shadows and the high lights will take care of themselves" receives under the new conditions a flat contradiction; the high lights have now to be reckoned with and the shadows must look after themselves. So, we fear, in architectural subjects, especially as regards interior work: unless the "composition" or "study" be in one key—no dark shadows—and generally well lighted, the autochrome plate is of no advantage to architectural photography.

### BRITISH SHOP-FRONTS.

*English Shop-fronts, Old and New. A series of examples by leading Architects selected and specially photographed, together with descriptive notes and illustrations. By Horace Dan, M.S.A., and E. C. Morgan Willmott, A.R.I.B.A.  $6\frac{3}{4}$  in. by 10 in. 52 plates and 25 other illustrations. 15s. nett. London: B. T. Batsford, 94, High Holborn.*

IN the publication of technical books there must be some subtle mental telepathy among the technical publishers. We commented quite recently on the books that had lately appeared dealing with the French Architectural and Decorative styles, of which England will probably see much during the next decade. Within the last few months two of our American contemporaries have included in their pages critical articles, elaborately illustrated, dealing with the modern American shop-front; and now, hot-foot, comes this volume from Mr. Batsford, treating of the *British* counterpart. For Messrs. Dan and Willmott include several examples north of the Tweed, and if dubbed "English," Scotland will have none of them!

Well, the book has been done—it ought to have been done before, and on the whole it has been done well. So far as the publisher is concerned we have nothing but praise. In two of the issues for 1903 THE REVIEW had an article on the same subject, and most of the examples then illustrated find a place in the present volume. On the whole the most obvious feeling on perusing it is sadness at the pitiful lack of material of which to make a book: our absolute poverty in shop-fronts of any architectural virtue or pretension. For though our authors have raked together thirty-nine modern fronts, several of these ought to be conspicuous by their absence. And to some of the commentaries on these thirty-nine we must take severe exception. To unreservedly praise the Jaeger shop-fronts, and to say that the subject of Plate 34 "is an excellent and scholarly design of the square-headed double-storied shop-front," makes us doubt whether Messrs. Dan and Willmott are safe guides on this question. There are several distinguished architects with offices in the immediate neighbourhood of this front. Do they think "it satisfactorily demonstrates, that by the enlarging of the glass voids of the lower portion, a chance is offered for making better proportional adjustments between the lower and upper portions of the concerned building"? We wonder! On these lines the authors might have included all the masterpieces that emanate from Gray's Inn Road.

### PERSPECTIVE DRAWING.

*The Theory and Practice of Perspective Drawing. By S. Polak, Art Master; Lecturer in Art under the London County Council.  $11\frac{1}{4}$  in. by  $8\frac{3}{4}$  in. pp. 184. 5s. The Organised Science Series. University Tutorial Press Ltd., 157, Drury Lane, London, W.C.*

THE greater attention paid now to technical education has naturally resulted in the production of a large number of textbooks on the more organised branches of science. In recent years there have been quite a number of works published on perspective drawing, one or two of which have been quite good, but the majority of little real value. Mr. Polak's work seems to us one of the best of the modern works that have been issued, and the very complete course which is contained within his pages has been designed to meet the requirements of the syllabus of the Board of Education and of similar examinations. The book should be found valuable to architectural draughtsmen, as it gives directions for very much more difficult problems than are usually included in the average textbook on this subject. The numerous diagrams are clear and legible, and the directions are concise and direct.



**SOME DORSET MANOR HOUSES.**

*Some Dorset Manor Houses.* By Sidney Heath and W. de C. Prideaux. 12½ in. by 10 in. pp. xxxvi, 280. Forty drawings by S. Heath and rubbings from brasses by W. de C. Prideaux. 30s. nett. Bemrose & Sons, Ltd., 4, Snow Hill, E.C., and Derby.

It is difficult to place this somewhat over-massive book in any definite category. Mr. Heath describes twenty of the manor houses of Dorset, and illustrates them by ink drawings, while Mr. Prideaux supplies notes on sepulchral brasses of people connected with the manors dealt with. The treatment generally is something between that of a county history and a gossip guide, and leans to the latter. Mr. Heath's introduction deals generally with the development of domestic architecture and the place of the manor house, but we look in vain for a single plan or for any solid criticism of the type of building which is the *raison d'être* of the book.

The sketches seem to have been too much reduced from the originals in reproduction, most of them are in a highly speckled technique and a few are weak in perspective. The bulk of the book is on good rough light paper, and there seems no point in printing the larger drawings on perishable coated paper. There are a few photographs of minor features, the product of a not very efficient camera. For the reproductions of the brasses we have nothing but praise. The figure-work, inscriptions, &c., are printed in black on a gold ground and are most effective. That of Christopher Martyn at St. Mary's, Piddletown, of 1525, is a delightful late example and but little known. The book will be valuable and interesting to Dorset people, but we fear cannot claim the attention of a very wide public, though Mr. Heath has added a fresh and pleasant note by identifying many of the houses with the scenes of Mr. Hardy's novels. It is delightful to revisit, under Mr. Heath's guidance, "Chene Manor" (Canford Manor), "Lady Constantine's Tower" (the Drax Tower at Charborough), and the "Wessex" home of Bathsheba Everdene.

There is an index of persons; but why, oh why, no general index?

**DISCOVERIES IN CRETE.**

*The Discoveries in Crete.* By Ronald M. Burrows, Professor of Greek in the University College, Cardiff. 8½ in. by 5½ in. pp. xvi, 244, four plates. 5s. nett. London: John Murray, 50A, Albemarle Street, W.

THE researches in Crete, both by Dr. Arthur Evans and by the Italian archaeologists, are so far from completion that a reasoned theory of the development of Minoan history and art is not yet possible. Professor Burrows has, however, done considerable service in setting out in a very handy volume the present state of knowledge on this vastly important subject. The book may be regarded as an interim report, and as focusing conveniently the rays of light scattered throughout the proceedings of various societies. It is refreshing to note the loyal way in which Professor Burrows gives honour to that most distinguished antiquary Dr. Evans, of whose work English archaeology has reason to be greatly proud. The volume deals somewhat sparingly with the architectural finds at Knossos, though there is a good plan of the palace. The author lays emphasis on the staggering modernity of the drainage and sanitary systems, pointing out that we can find no parallel in classical or mediæval days, but have to take the leap direct into our own times. In the fulness of time, after the excavations are completed, and above all after there has been an opportunity to digest the mass of baffling and apparently conflicting evidence, we hope that Dr. Evans will write a comprehensive book on Knossos. Meanwhile gratitude is due to Professor Burrows for making so readily accessible the

knowledge which has been so far acquired, and to Mr. Murray for bringing out the book so cheaply, a welcome departure from the ordinary practice of archaeological publishing.

**THE HOMELAND HANDBOOKS.**

*Where to Live Round London: Southern Side.* Edited by Prescott Row. pp. 204. Paper, 1s. nett; cloth, 2s. 6d. nett.

*The City of St. Albans: Its Abbey and Its Surroundings.* By Charles H. Ashdown, F.R.G.S., F.C.S. pp. 152. 1s. nett.

*Northampton and Its Surroundings.* By S. S. Campion, I.P., with notes by Beby Thompson, F.C.S., F.G.S.; H. M. Dixon, M.A., F.L.S.; and the Rev. W. A. Shaw, M.A., pp. 112. 6d. nett.

*Torquay.* By Percival H. W. Almy, with a foreword by Eden Phillpotts. 1s. nett.

*Bury St. Edmunds and its Surroundings.* By W. A. Dutt. 6d. nett.

WE have received the above useful and comprehensive guides, which are of the series issued by the Homeland Association. They are full of information both of an historical and archaeological character, and contain some good maps and much valuable information about train fares and services, &c., which will be exceptionally useful to those who contemplate visiting the places named, or who desire information preparatory to settling down. The guide to suburban London will be invaluable to those faced with the necessity of looking out a home in the "great village." Full information is given as to train fares and season ticket rates, time occupied in train journeys, amount of rates in the pound, house rents, &c., together with some interesting particulars about each place, which will be useful in assisting anyone to make up his mind. In one particular only does the book appear to us a little defective, and that is perhaps one of the most important particulars—the house rent. We see that in most of the districts the figure is given as from £25 or £30 and upwards. A little more detailed information as to the class of house which can be procured for such rents would be valuable, and some additional particulars as to the class of houses in the neighbourhood. Perhaps a few illustrations of the houses would be useful. Otherwise the book seems all that can be desired.

**YORKSHIRE ABBEYS.**

*The Ruined Abbeys of Yorkshire.* By W. Chambers Lefroy F.S.A. New and Revised Edition. 7 in. by 4½ in. pp. xvi, 296; 46 illustrations. 2s. nett. London: Seeley & Co., Ltd., 34, Great Russell Street, W.C.

THIS handbook has evidently been popular, as it was issued twenty-five years ago. It deals with Fountains, Rievaulx, Richmond, &c., in a pleasant conversational way, and is doubtless of value to the people who like to take their archaeology gently. The author proceeds on safe lines in following such great authorities on matters monastic as Mr. W. H. St. John Hope and the late Mr. Micklethwaite. The sketches are poor and the blocks seem to be unduly worn. Any further edition would be greatly improved by the substitution of photographs of the same subjects.

One is not too particular about the literary phraseology of such books, but surely "dusky antediluvians" is a somewhat drastic periphrasis of "black monks."

We confess a book like this rather makes us sigh for a similar book written by Mr. St. John Hope. Meanwhile, however, this volume will be a useful introduction to a subject of perennial fascination—for those who have not walked that way.



### MASTERPIECES IN COLOUR.

*Velazquez.* By S. L. Bensusan. Illustrated with eight reproductions in colour. 8 in. by 6 in. pp. 77. 1s 6d nett. (In the series of "Masterpieces in Colour," edited by T. Leman Hare.) London: T. C. & E. C. Jack, 16, Henrietta Street, Covent Garden.

THIS is a pleasant little book, and though the colouring of the reproductions is rather heavy, it is a sufficiently notable achievement of modern publishing that such a book can be produced at eighteenpence. It seems rather a pity, though, that where only eight plates are given one should be used for "Antonio the Englishman." It is a thoroughly unpleasant picture. However important a place the pictures of dwarfs may take in a considered review of the art of Velazquez, they seem hardly appropriate to a popular handbook.

### HERALDRY AND ITS BLIGHT.

*Heraldry as Art: An Account of its Development and Practice chiefly in England.* By G. W. Eve. 9 in. by 5½ in. pp. x, 308. 299 Illustrations. 12s. 6d. nett. London: B. T. Batsford, 94, High Holborn.

MR. EVE has realised the increased interest in the decorative value of heraldry and the very wild notions abroad as to its appropriate treatment. He has done creditable work in a practical way himself, in book-plates, shields modelled in gesso, cartoons, &c. Some of these are reproduced, and as far as treatment goes have the right feeling. He gives sound advice as to the appropriate proportions of charges to fields, and very properly recommends large charges instead of the woe-begone little spots beloved of the heraldic stationer. The development of treatment is well set out, and the illustrations of work of different periods are (save for some notable omissions, of which more hereafter) suitably chosen and fairly adequate.

But the fact remains that Mr. Eve has written, and Mr. Batsford has published, a book that in no way meets the real need, the stripping from Heraldry of the foolish cloak of mystery which has suffocated it, and to reveal it sane and simplified once and for all to the public eye. Nothing will ever be, or can ever be, popular if it is not understood. Now, the so-called science of heraldry is (to borrow a phrase of Mr. Prior's) "to the craftsman, foolishness." We may add that to everyone who is not prepared to clog his memory with imbecile dog-Latinisms it is also a hopeless stumbling-block.

What lead does Mr. Eve give us? We are to learn how to blazon, to practise it assiduously, "however irksome and pedantic it may appear," to make sketches from written blazons and check them, to write out blazons from illustrated coat armour and check them, to make ourselves perfect in a foolhardy ragbag of misspelt and Anglicised French jargon which was invented long after heraldry had ceased to have a practical significance, and when it was, decoratively, on the broad road to destruction.

When every country blazons in its own vulgar tongue, and when in the vital days of heraldry Englishmen blazoned in English, why should we be confused with silly phrases like *crined or* when we only want to say *with golden hair*? Why *argent a pierced mullet*, as though it were a wounded fish, when we mean *a silver spur rowel*?

If *rowel* were good enough for the old rolls of arms, is it not good enough for 1907? What is the matter with a *blue lion looking backward* that we should be told to say *lion rampant regardant azure*? Heraldry is not a science needing a book of a thousand rules, and never was one till the armorists of Elizabethan times made a close corporation, and invented the clotted futility of *flurty-conjoined-degraded-anserrated* and the like stuff to muddle the armigerous or would-be armigerous public.

The euphuists of the sixteenth century delighted in the philosophy of Bedlam, which so confuses the pages of Spenser that for all his sweet singing the "Faerie Queene" is a closed book to all save the enthusiasts of literature.<sup>1</sup> Arts and crafts have nothing to do with the delirious symbolism which drivels through the pages of Dame Juliana Berners, and it is time that the lingo of the euphuists went into the everlasting dustbin.

When Lewis Carroll put the White Rabbit into a herald's tabard to blow a heraldic trumpet everyone was justly amused; but, rightly considered, the fog of wordiness which smothers heraldry would be far more amusing, were it not choking its decorative possibilities.

Mr. Reginald Blomfield has said that no art can afford to be insane: the augurs of heraldry have tried their best.

Mr. Eve very mildly deprecates the practice of indicating the colours and metals by various arbitrary hatchings and dottings, in engraved and carved work. He should have stamped on it. It is another seventeenth-century practice with nothing to commend it. It fritters away pleasant surfaces, which should either be left plain or diapered with unheraldic scrollwork or flower ornament, and it conveys nothing to one man in ten thousand.

When we come to look at Mr. Eve's suggested sources for inspiration, we are grieved to find not only no illustration but not even mention of the stall-plates of the Knights of the Garter in St. George's Chapel, Windsor. Save for heraldic seals there is nowhere in England so magnificent a storehouse

<sup>1</sup> Many of the best statements as to what heraldry is and may be made will be found set out in the volumes of *The Ancestor*, edited by Mr. Oswald Barron. Unhappily the publication of this authoritative quarterly has lately ceased. Mr. Barron's learning is so great, and his handling of his subjects so vivid and amusing, that his services to heraldry cannot be exaggerated.



GARTER STALL-PLATE AT WINDSOR,  
OF JOHN, LORD CORNWALL, K.G., c. 1405-1443.  
DATE OF THE PLATE, 1422.

(Reproduced by kind permission of the Editor of the "Journal of the Society of Arts," and W. H. St. John Hope, Esq.)





SHIELD OF JOHN, 5TH LORD ERSKINE.

PAINTED GESSO. G. W. EVE.

From "Heraldry as Art."

from which we may gather ideas for treatment of helms, crests, mantlings, and shields. Also they have been published and are perfectly accessible.

Much (we may safely say, most) architectural heraldry is bad for the reason that people do not understand what armorial bearings were. Mediæval knights wore a helm on which was fastened a tuft or plume (the original crest), an animal's head or some other intelligible badge. The helm was covered behind by a scarf, originally arranged like a puggaree, and where it was tied round the helm it formed the wreath or torse. This scarf developed decoratively into the mantling, and the wreath is now ordinarily represented as a solid twisted parti-coloured sausage on which the crest sits forlorn. It is absolutely meaningless without the helm of which it was an adjunct. Mr. Eve gives the good advice to designers to think of these things "in the round," instead of seeking inspiration from late engravings by armorists who eschewed common sense. It is obvious that a corporation cannot wear a helm, and it is one of the absurdities of official heraldry that City Companies should have had the whole trappings granted to them. Mr. Eve would have been well advised to have omitted the helm and peculiarly absurd crest from his cartoon of the arms of the Goldsmiths' Company. A fine design could be made of the shield and supporting beasts alone, but perhaps the City gentlemen would have felt bereft. Also we do not like the unicorns dancing on the motto ribbon. Why not something more solid?

Mr. George Bernard Shaw has suggested that local authorities should be able to get "from some preposterous body called the Heralds' College" coats of arms and seals for £2 10s. to £5, instead of the traditional £76 10s. If that reduction ever comes, and we doubt it, heraldry will be more popular than ever. In any case, there are enough possibilities for heraldry to-day to make it very desirable that its treatment should be more intelligent. Meanwhile we may well mourn the treatment of the royal arms over the door of the National Portrait Gallery.

Hogarth put the lion and unicorn rolling on their backs. At Trafalgar Square the supporters are presumably so called because they do not support, but lie down comfortably in the corners.

No, Mr. Eve must try again, and write a book which shall show heraldry as a sane art, freed from the suffocating pedantries of Dryasdusts.

### SCULPTURE—A NATIONAL PRODUCT!

*A History of Sculpture.* By Ernest K. Short. 8½ in. by 6 in. pp. xvi, 327. 100 Illustrations from photographs. 7/6 nett. London: William Heinemann, 21, Bedford Street, Strand.

A HISTORY of sculpture from the rise of Hellenic art to the present day, in about 300 pages, is an ambitious venture, but Mr. Short has acquitted himself well and produced a very informing and stimulating volume. He starts with the root idea that all sculpture is the product of national life, that "the artist is the child of his time." This is especially the case with the various phases of Hellenic Sculpture. The epic splendour of the Panathenaic frieze reflects the age of Pericles, while the lyrical, sensuous appeal of Praxiteles connotes the decline of Athenian power and the sounding of a more individualistic note. It is almost inevitable that the personal predilections of the writer should count largely where the material is so great and the limits of the book so small. Mr. Short's sympathies are obviously with the Greeks and the Renaissance chiefly. Roman sculpture is dealt with almost exclusively from the standpoint of portraiture. Trajan's influence on history is set out, but Trajan's Column does not even get a passing reference. Surely the narrative sculpture of Rome is a marked outcome of the national life and deserves a place in Mr. Short's calculations.

The Hellenism of Pasiteles and his school at Rome is a curious parallel to modern eclecticism, and Mr. Short drives home his points by such modern references as to Mr. Kipling and—Mr. Dooley.

Gothic sculpture seems to get a good deal less than justice. It is dismissed in seven pages. The Hell Mouth is admittedly a characteristic gothic idea, but we think that there should have been something else than that illustrated. Mr. Short speaks of "the absence of sculpture of real beauty." "Though the gothic sculptor cannot be denied his meed of praise," is faint praise indeed for the great men (none the less great for being unnamed) who carved Solomon and the Queen of Sheba at Chartres and Rheims, and for the "imaginatores" at Wells Cathedral.

If we are to follow Mr. Short's theory that it needs a "great political or social force" to call forth the craftsmanship of the sculptor, we can hardly fail to look for some result of Mediæval Christianity in the North, and to find it on the English and still more on the French cathedrals.

With the Renaissance the author deals fully and with great sympathy. Passing to modern times, the eclecticism of Canova and Thorvaldsen on Hellenistic lines is rightly appraised at its true, and not very high, value, but we think it almost as true that François Rude was eclectic in his magnificent composition "Chant du Départ," only there the eclecticism was based on Roman originals.

With the moderns and particularly with England's school of sculpture Mr. Short deals adequately, and his observations on Alfred Gilbert's great achievements and his unfulfilled promise are acute and just.

Of omissions we would mention a few in the hope that a new edition may see them added. Cretan sculpture is dismissed as being too archaic to come into the scheme. The ivory statuette of the Leaping Boy at Knossos is surely a "document" in the history of sculpture. We suspect from



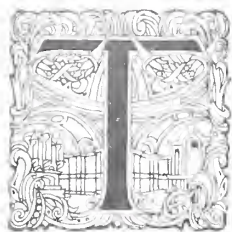
the fact that Dr. Arthur Evans is referred to as Sir Arthur Evans (an obvious confusion with Sir John Evans) that Mr. Short has only casually looked into the Cretan finds.

La Dame d'Elché in the Louvre is of course a very controversial subject, but we think of so outstanding a beauty as to deserve a reference and illustration. We admit, though, that it would puzzle Mr. Short, as it has puzzled most people, to attach her to any historical period.

The literary manner of the book is a little marred by a plethora of quoted poetry, but we can forgive much for the

pleasure of meeting again Samuel Taylor Coleridge's aphorism "the principle of gothic architecture is infinity made imaginable." Mr. Short has a widely allusive manner eminently suitable for a book which takes bird's-eye views, and while his phrases are not always very clear-cut they are expressive. The volume is as readable as it is useful; and readable books—well, one should read them. The hundred illustrations are admirably chosen and printed, and make a very catholic gallery for reference, in itself no small merit.

## Notes from Paris.



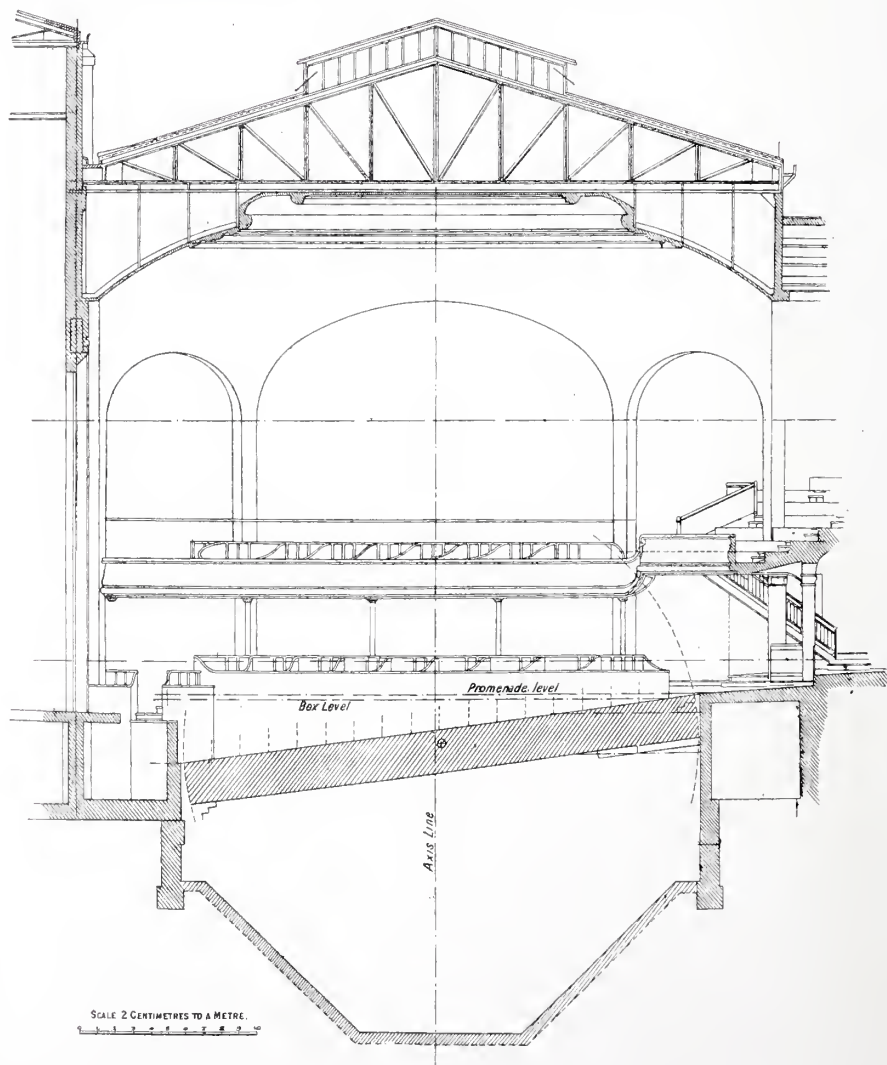
THE Apollo, 18 Rue de Clichy, is both a music-hall and a large ballroom. Monsieur J. M. Auburtin, the architect, had to build a hall which would fulfil the requirements of both places, and which could be transformed before the eyes of the public in less than a quarter of an hour.

The area covered by the Apollo is 60 m. by 27 m., or 1,935 square yards. The entrance in the Rue de Clichy leads into a hall in which are arranged the ticket offices, &c., and opens then into a large hall fitted as a café-bar. From every seat in the café the stage can be seen, thanks to the height of the central balcony fauteuils. Beyond this great "bar" is the principal hall, covering a ground space of 27.50 m. by 27 m. This hall comprises a promenade, 20 boxes, 4 stage-boxes, and 380 fauteuils on a movable floor. On the first floor is another promenade, 31 boxes, and 160 balcony fauteuils. This first floor is well served by numerous staircases leading directly to the exit.

The chief interest of the Apollo centres in the "Basculo," or movable floor. This floor of iron-girders measures 14.55 m. by 15.14 m., or about 278 square yards, and weighs 95,000 kilogs. To allow of the rapid transformation into a ballroom, M. Auburtin had

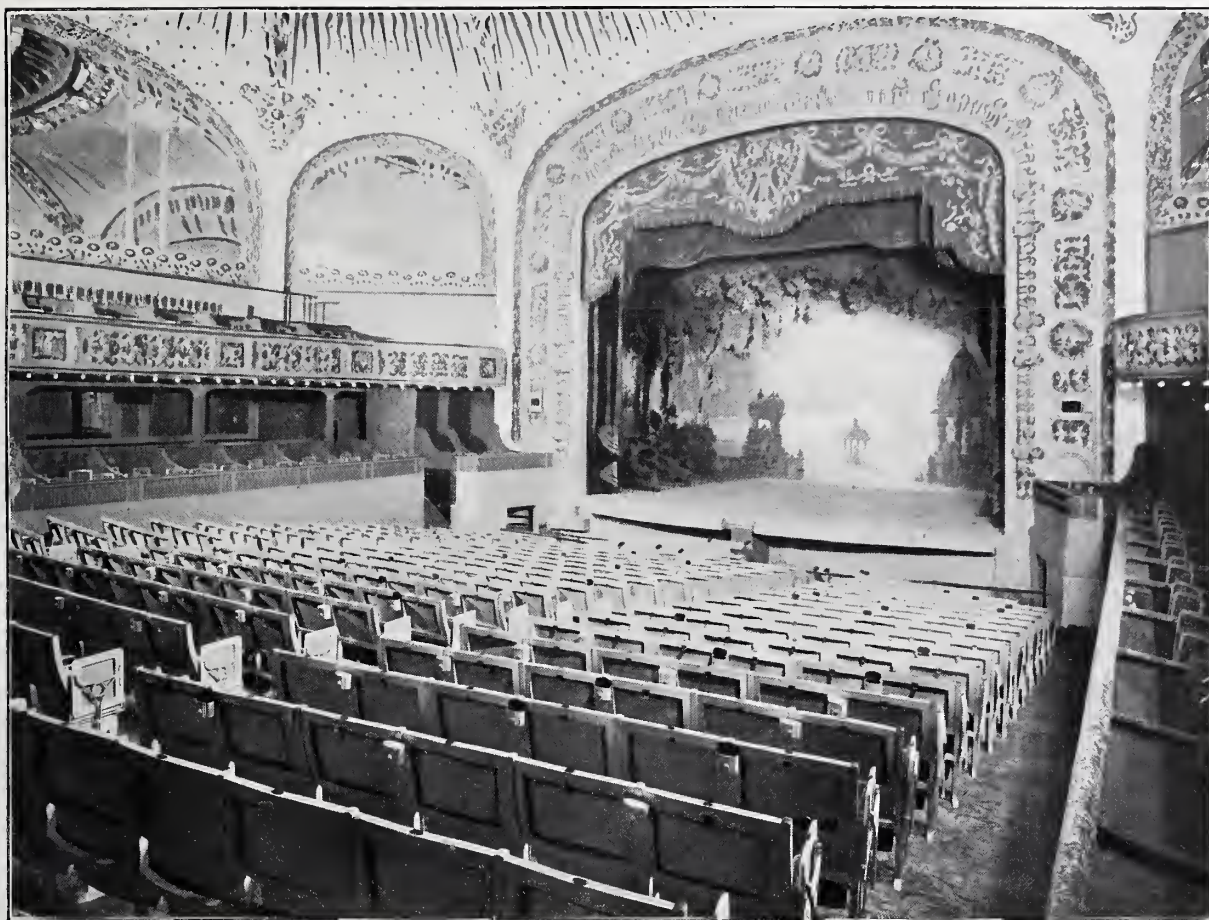
the excellent idea to make this floor turn on a horizontal axle, and in this way to bring to the place of the 380 fauteuils inclined to an angle of 0°135 m. per metre, a well-polished horizontal floor convenient for dancing.

The rotary axle is not in the middle of the thickness of this floor, the weight not being equal on each side. The axle is composed of two small trees fixed to the extremities of the floor, and



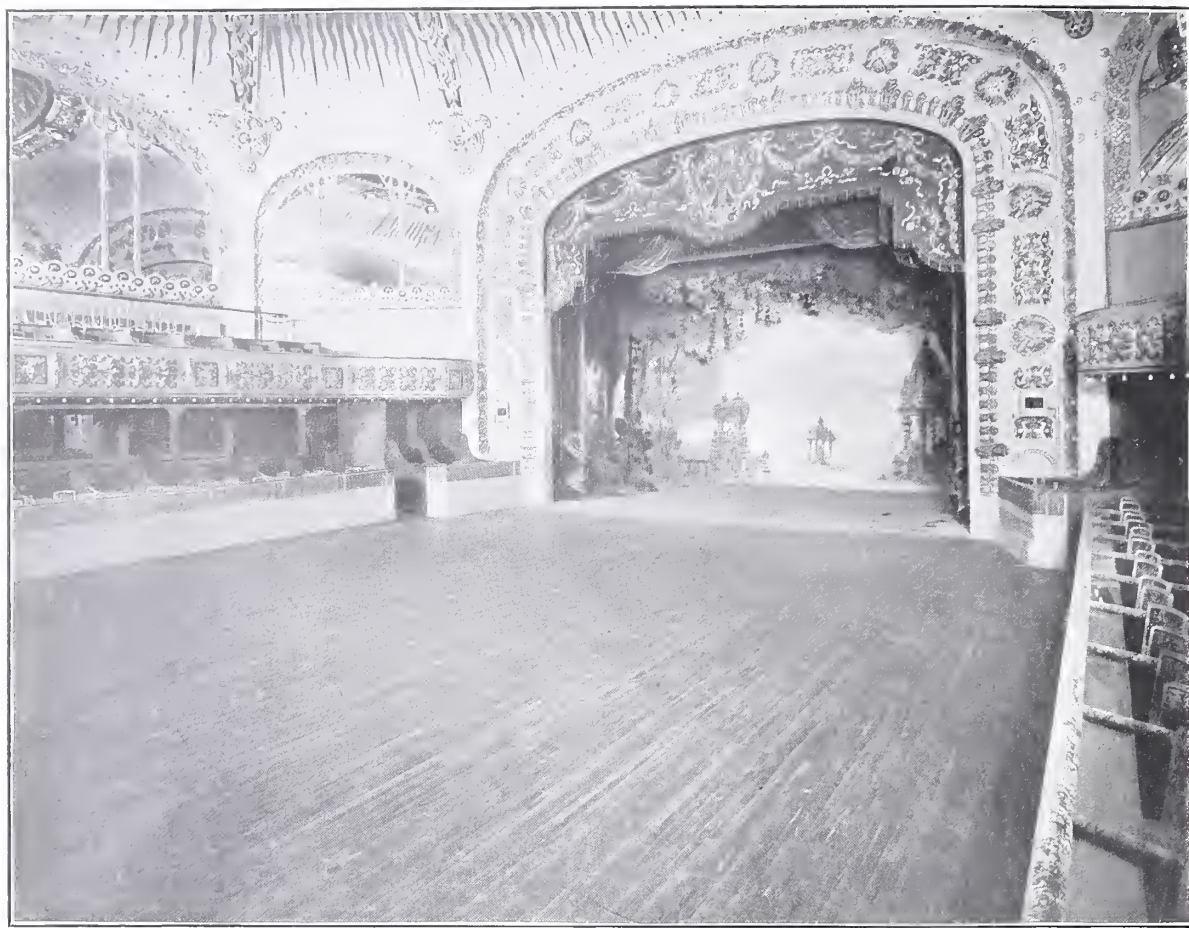
SECTION OF THE AUDITORIUM OF THE APOLLO MUSIC HALL, PARIS, SHOWING THE "BASCULO" FLOOR.





THE APOLLO MUSIC HALL, PARIS: AS A THEATRE, AND CHANGING—





TO A DANCING HALL: THE APOLLO THEATRE, PARIS.

resting upon two cushions. The whole is worked electrically by a 6-h.p. motor, and passes into an excavation 10 metres deep. To make this excavation the walls of the neighbouring buildings had to be pinned up.

The Basculo is kept steady partly by its axle, and also, for greater security, by four large bolts placed in the angles. There are four bolts for each position, as the one is inclined and the other horizontal. When the hall is used as a ballroom the level of the promenade is reached by steps, and the orchestra is placed on the stage, which is on the same level as the floor of the Basculo.

The stage measures 13 metres deep by 17 wide, with an opening of 11 metres upon the hall. It is horizontal, which is infinitely preferable for a

music-hall where acrobats, cyclists, jugglers, &c., have to perform.

The decoration of the hall has been designed in such a way that when used as a ballroom no one would imagine he was in a theatre. The ceiling is particularly interesting by reason of the arrangement of electric lamps forming designs.

Two iron screens separate the hall from the stage; on this latter are found three stories of artist's boxes with an exit on the Rue de Clichy by an underground passage.

The ventilation is electric throughout. As to the expense of construction, the floor alone cost £2,200, the work of excavation and underpinning, machinery, &c., amounted to £3,600, while the total cost of the music-hall, building, and installation complete, was £28,000.

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